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THE CONGRESS AND BUSINESS.

IT is inevitable under a representative government, such as exists in the United States, that the legislative discussion of a matter of such widespread interest as revising the tariff schedules should consume much time. The Congress frames every law without the initiative or control of any other branch of the government, and not only has every senator and member the right to be heard, but the constituents of every one may be demanding that he speak publicly in their special interest.

The diversity of interest on many points leads to discussion, as is intended in the very foundation and theory of the American system. The *Congressional Record*, during the special session at Washington, has been running to an average of fifty large pages per day, devoted mainly to the tariff debates, and a perusal of the contents—whatever else they may embrace—suggests a vast amount of intelligent study and forceful argument by men of national reputation for capacity and integrity. Such are the men who are attempting to frame a new tariff law—something which in no country can be accomplished in a hurry.

It is to be regretted that business conditions should be disturbed in any sense by the pending of important legislation, but THE INDIA RUBBER WORLD has contended always that the tariff question in America has figured far too large in the public mind, and that such obstruction to trade as now seems to exist—so far as any action by the Congress is concerned—is mostly a "state of mind."

THE HIGH PRICE OF RUBBER.

THE topic of chief interest and importance to the rubber trade to-day is the high cost of rubber, and this involves the consideration of whether lower prices are a near possibility. It may be that the rates just now prevailing will not be long maintained, but no present indication points to really cheap rubber. A salient fact is that the recent record high prices accompanied probably the largest production of the raw material in any year, from a constantly increasing number of sources, under conditions which preclude any idea that supplies have been under manipulative control, and in spite of the fact that the market is soon to receive larger quantities of rubber from plantations. Clearly the explanation is in a growing demand for rubber in the industries—a larger production of goods either actual or in prospect.

It is of interest, therefore, to consider the probable output of rubber in the early future. The growing production on plantations has been mentioned; there is reason to believe that the Amazon region will continue slowly to increase its yield, year by year, as has been the case for a half century, as the available working force can be augmented. The net total supply from other forest sources, for reasons which THE INDIA RUBBER WORLD has suggested so often, does not promise any increase. Meanwhile the world's needs for rubber grow incessantly. Can the plantations keep pace with the growing demand?

From time to time THE INDIA RUBBER WORLD has reported on the progress of typical plantations of *Hevea*, as it does in this issue, the point of each report being a rapid increase of annual yield and a lower cost of production. But still the total plantation yield is too small to be of great present importance to the industry; it is of interest more from the promise which it gives for the future. While all the plantations that have been formed may not prove so successful as "Lanadron" or "Vallambrosa," for example, undoubtedly many millions of trees already planted will in time become prolific yielders of rubber. But, as we have said, the demand for rubber grows.

Our friends in the East continue to discuss the cost of their rubber as compared with Brazilian, evidently with the idea that they possess a marked advantage. This has led us to admit to this issue a communication which argues the question from a Brazilian standpoint. Whatever may be true in the end, it is only fair to give both sides a hearing. But so long as present conditions of supply and demand obtain, the world will need all the rubber that can be produced in the Amazon region as matters exist there. And considering that real "Pará"

rubber has not been produced elsewhere, it is not unlikely that this grade will yet outrank the best plantation rubber in the matter of prices.

Malaysian planters may produce rubber at a low cost, but they cannot meet the world's demand for quantity, nor supply everything that is needed in the way of quality. All of which being true, the world must pay enough for Brazilian rubber to make its production interesting to the *seringueiros*.

AERIAL NAVIGATION AND RUBBER.

WHILE the india-rubber industry, a half century ago, though still new, seemed to its founders to have reached very large proportions, its output in America was still confined chiefly to articles of footwear and abroad, related mostly to waterproof garments. Both these branches have been developed greatly meanwhile, but the growth of the industry on the whole has been due vastly more to newer applications of rubber. Druggists' sundries alone call for more rubber than sufficed for the whole needs of the world at the period first referred to. But how small is the consumption in this branch compared with what goes into belting, packing and hose. The most spectacular, by far, of the newer uses of rubber has been for tires, the demand for which apparently grows larger in proportion to the world's population every year. While absolutely less rubber is consumed in another new branch, electrical insulation, it is doubtful whether any other use of the material is growing at a relatively greater rate. These uses alone of the raw material appear to grow more rapidly than the world's existing capacity to produce it, not the least indication of which is the vast absorption of reclaimed rubber—something which Goodyear nor Macintosh nor Hancock appear to have dreamed of.

If the catalogue of the uses of rubber were now complete, doubtless consumption would long keep pace with production, but while the world continues to make industrial progress it is probable that inventors and manufacturers will still find new ways in which to make rubber useful. To-day the most interesting illustration in this line is in the field of aëronautics, concerning which every newspaper daily reports progress, though rubber may not be brought much into public notice as a component part of balloons and flying machines. Rubber is of importance in this connection, however—perhaps not less essential than in the equipment of automobiles and other vehicles.

It would be idle to ignore the definite progress which has been made of late in the navigation of the air, and whether this will eventually become of most importance in its military aspect or for commercial uses, or merely for purposes of pleasure, there cannot fail to be very many aërial vehicles made and sold, and it seems likely that the rubber industry will be called upon to contribute largely to their construction and equipment.

THE GROWING PRACTICE of the rubber producers of the Amazon region in stocking their properties with cattle might be worth while imitating by some planters of rubber a good deal farther north.

WE COMMEND TO THE NOTICE OF "UNCLE SAM" the example of Germany, in laying a transatlantic cable to Brazil, as indicating that her statesmen do not hold to the idea of waiting for an important trade with another country to exist before providing facilities for such trade.

HAS ANY ONE SUGGESTED that the present regime of high prices of rubber would afford an opportunity to accumulate a treasury reserve in those Amazon states which tax the exports of this material so heavily?

ABOUT THE ONLY REFERENCE TO RUBBER so far in the prolonged debates on the tariff at Washington has been that by a senator from Iowa—in whose state there is no rubber factory—in relation to wool lined rubber boots, of which there are no imports into the United States.

THE LISTING OF THE SHARES of an American rubber manufacturing company on the Paris *bourse*, if it should lead to a large interest abroad in the company's issues, will not prove a bad advertisement, since the holders of the shares will naturally think of buying the products on which their dividends depend whenever they require goods in that field.

IN VIEW OF ALL THAT HAS BEEN PRINTED regarding "the American crisis," which was mentioned particularly at so many company meetings in the rubber interest abroad, it may be worth while to remark that no failure of any company with any standing in the rubber industry in this country occurred during the period of depression, while it would appear that dividends have been maintained at the usual rates.

IT WOULD SEEM IN ORDER for the rubber shoe manufacturers to promote the settlement of Alaska—the one region of the United States where there is "rubber weather" every winter. In any event they might do more to promote the sale of rubber boots in that interesting territory, a special opportunity for studying which is afforded by the Yukon exhibition now in progress at Seattle.

AND NOW RUBBER PLANTING COMPANIES are looking to consulting chemists to aid them in producing "the best rubber possible." If things keep on at this rate it may come about that no one connected with rubber in any way need hesitate to consult a chemist for fear of its seeming a confession of ignorance of his own business.

WHILE THE AMERICAN RUBBER INDUSTRY DEPENDS very slightly upon the export trade, it is an indication of better business conditions worth noting that the volume of exports is showing an improvement.

BEFORE THE LAST ADVANCE IN CRUDE RUBBER a London broker of recognized standing asserted at a meeting of shareholders of a planting company that his firm had offers for rubber for delivery up to the end of this year at $1.36 per pound. This doesn't prove that we may not see cheaper rubber, but at least it is a straw which shows the direction that rubber prices are taking.

IF "SYNTHETIC RUBBER" IS EVER to be developed commercially it ought to be when crude is quoted at present figures.

WE MAY EXPECT TO SEE this the banner year for the organization of rubber planting companies.

LIBEL SUITS IN THE CONGO.

THE trial of the libel action brought by certain Belgians against two American missionaries which was to come up at Leopoldville, in the Congo, on May 25, has been twice postponed, the second time to July 30. The suit is brought by representatives of the Cie. du Kasai (the Kasai Syndicate) in respect of a publication in the *Kasai Herald*, in January, 1908, charging cruelty to natives engaged in collecting rubber. The defendants are the Rev. Dr. William Morrison and the Rev. W. H. Sheppard, both from the southern United States, representing the Presbyterian church, and located at Luebo on the Kasai river. The postponements in this case are reported to have been made at the request of the United States government, but whatever may be true in this regard, doubts are expressed whether the case will ever come to trial.

A PROPOSAL TO TAX RUBBER.

A CORRESPONDENT of the London *Daily Express* suggests that, in view of the large number of British investors in rubber plantations and the amount of capital involved, the government should act in their interest to the extent of imposing a penny per pound on any rubber imported from other than British territory. His idea is that the tax suggested is very moderate for a commodity the price of which in a single year fluctuates from 2*s.* 9*d.* to 5*s.* per pound. In a free trade country like England it probably would take more than a letter to the able *Daily Express* to bring about a tax on imports of crude rubber, even in the name of "tariff reform."

FORESTRY IN THE PHILIPPINES.

THE report of the director of forestry of the Philippine islands for the year ending June 30, 1908, under charge of Major George P. Ahern, as director, indicates a great extension of the work of organization, with an increase in results of utility. During the year the Philippines were visited by Dr. Treub, director of agriculture and forestry in Java, at Buitenzorg, and later by an agent of the latter department, who recommended to his government the employment of several American foresters, from the Philippines, to investigate the forests of Sumatra. Captain Ahern has published a bulletin on "A Philippine Substitute for Lignum Vitæ," known locally as "mancono," and which he regards as very valuable. The collection is reported, during the year, of gutta-percha and rubber to the extent of 896 metric quintals [=197,532 pounds].

RECLAIMED RUBBER AND THE TARIFF.

EDITORIAL NOTE.—The communication which follows, being unverified by any name known to the Editor, is printed for what it may be worth, by way of suggestion. It may be mentioned, however, that the conditions referred to have been changed, as will be seen from a report of a new customs decision which appeared in the June issue of this journal.

TO THE EDITOR OF THE INDIA RUBBER WORLD: I have had an interview with a large local dealer in old rubber, in regard to the article published in your issue of May 1 (page 285), under the title "Reclaimed Rubber Also Free." The said dealer made the following statement:

"The purpose of the rubber works in Russia in causing a Russian export duty to be imposed on waste rubber, was that of placing themselves in a position to compete with the American reclaimers in selling reclaimed rubber in America, inasmuch as reclaimed rubber can be exported from Russia without paying an export duty."

My informant was surprised that the American customs department is still in doubt whether this product is "crude rubber," inasmuch as Russia would not otherwise allow it to be exported without paying an export duty. Moreover, the Russian rubber works if obliged to pay the export duty on reclaimed rubber would not be able to compete with the American producers.

The rubber reclaiming works in America must make every effort to induce their government to impose an import duty on European reclaimed rubber, as otherwise they will suffer a serious loss, while the Russian rubber works would attain their purpose.

The dealer in question further informed me that the amount of old rubber shoes collected at the present time in Russia is about 50 per cent. less than during the same season of previous years, and it therefore appears safe to presume the total supply of old rubber shoes in Russia will this year be one-half less than the average.

A CORRESPONDENT.

Moscow, May 17, 1909.

ROBERT D. EVANS ON SUCCESS.

APROPOS of the recent mention in these pages of Mr. Robert D. Evans, of Boston, a former leading rubber manufacturer, as the landlord this summer of President Taft, it may be of interest to quote here from an interview with Mr. Evans in the Boston *Post:*

"The story of the man who succeeds is a common one," he says. "Sifting each successful man's personal experiences, it all can be told in the words: 'Hard work, application and brains.'

"When I take a man into my business I want one to whom I can turn over a piece of work and have him with a little study understand the gist of it and what it entails. Five men out of eleven cannot do that. They will bungle the thing. What the business world needs to-day is young men of executive intelligence.

"While our colleges to-day are lacking in conditions for developing this executive ability in a man, the subject is getting more and more attention, as for instance in the course in business training that has just been established at Harvard."

"CHEMISM."

A PHYSICIAN who writes that he has been a constant reader of THE INDIA RUBBER WORLD for several years, and thus has been led to take an interest in the sources of rubber, feels that he has obtained by experimenting a material better adapted for a filler or assistant than any other substance thus far used in connection with rubber. "These efforts," he says, "have been based on the principle of obtaining materials possessing affinity for true commercial rubber that, when properly combined, yield a light and spongy product that requires less rubber in compounding than most other formulas, and when cost is considered I think it has not been equaled in the field of rubber compounds. The sources of supply are unlimited, and although this incipient industry has not passed its empirical stage, yet the writer feels confident that his efforts, with the assistance of his specialist in exploiting this interesting field, have been fully repaid by the results already accomplished."

MR. LOUIS CHARLES BERNACCHI, of England, and a director in The Inambari Para-Rubber Estates, contributed to *Travel and Exploration* (London, January, 1909) an account of "A Journey Into the Primeval Forests of Tropical Peru," which is very informing as to the natural conditions in the region where the rubber company are operating, the difficulties in the way of development, and particularly the character of the natives. He proceeded from the Pacific coast to the Inambari river, and found some rubber gathering in progress. He predicts that the region will in time become very wealthy. Mr. Bernacchi's trip was made before the rubber company ever existed.

A SHIPMENT OF CAUCHO AT ITAITUBA.

[This class of rubber abounds in Brazil, often on the same lands with *Hevea*. Itaituba is at the head of navigation on the river Tapajós.—From "Album do Estado do Pará."]

"VISTA ALEGRE," A *SERINGAL* ON THE RIVER ACRE.

[The property of Srs. Pio & Irmão. The productive capacity is 10 tons yearly. In the foreground are *pelles* of rubber awaiting shipment.—From "Album do Rio Acre," by Emilio Falcão.]

The Rubber System of the Amazon.

TO THE EDITOR OF THE INDIA RUBBER WORLD: Several articles in your journal lately, bearing upon the conditions of supply of crude rubber, while interesting and informing on the whole, seem to call for some supplementary information which I, by reason of a familiarity with the Amazon region, feel qualified to offer.

"VALORIZATION."

First, in regard to the projected syndicates, involving the idea of "valorization" of rubber. Thus far no rubber exporting syndicate actually is operative in Brazil, but more than one has been arranged for, to take advantage of the law enacted recently by the legislative assembly at Pará and signed by Governor Montenegro just before his term of office expired. As has been mentioned in your journal [January 1, 1909—page 154], this law provides for a rebate from the export duty on rubber, when the same is shipped by the owners of *seringaes* (rubber camps)—*i. e.*, the producers of rubber.

The basic principle of the new law is not, as THE INDIA RUBBER WORLD's readers may have inferred, to give Brazilians a monopoly in the rubber trade, but to aid the producers in financing their shipments during periods when market conditions are unfavorable. To-day the rubber producers on the Amazon must sell their output at certain seasons, without regard to the state of the market, at the prevailing quotations, whether a year's working should bring profit or loss. As you have mentioned already, the producers of rubber, by complying with the new law, may obtain from the branches of the Banco do Brazil, established recently on the Amazon, substantial advances on their "crops," thereby enabling them to hold the rubber in periods of low prices until conditions improve. This being practically a national bank, the effect of the new law is to give government aid to the rubber producers.

The law does not in so many words limit such accommodation to Brazilians, but since there is scarcely a *seringal* owner who is not a Brazilian, the effect is the same. When the new law was passed at Pará the price of rubber was exceptionally low, and it was thought to improve prices by withholding rubber from the market, with the aid of the bank advances. The sudden rise in prices, however, to the highest level on record, due wholly to influences outside of Brazil, has rendered unnecessary thus far the operation of the new law. But in case it should take effect, the owners of *seringaes*—complying with certain conditions—would be favored in two ways: (1) in being allowed to obtain advances from the bank, and (2) in being charged a lower than the regular export duty, the rebate being sufficient to more than pay the interest on the bank advances.

The Banco do Brazil is authorized to advance in the aggregate an amount reported at 32,000 contos of milreis [=$9,732,992 with exchange at 15 pence per milreis], allowing up to 75 per cent. of the officially recognized value of the rubber at the time, after deducting 10 per cent. of the weight for shrinkage.

THE AMAZON RUBBER SYSTEM.

A mistake too prevalent abroad is that Amazon rubber is obtained by haphazard methods by ignorant denizens of the forest. But I ask, if it were not for a well-organized system, how could Pará show a certain and well sustained and annually growing export of rubber? Could the manufacturers of Europe and America look confidently to the Amazon, year after year, for the rubber they need if there were not involved in its collection an intelligent system and large capital? True much foreign money has been sunk in efforts to exploit Brazilian rubber, but that was capital employed without intelligence or system. A *seringueiro* might fail as lamentably who suddenly essayed to operate New York's street railway system or control its police force.

I don't think THE INDIA RUBBER WORLD has ever told its readers that much of the "Pará" rubber exported from the states of Pará and Amazonas comes from privately owned lands, which are constantly being improved. Originally a man who wanted to go into the rubber business would ascend this or that stream and select a location for a *seringal* (literally a group of "seringa" trees—an early designation of the *Hevea*), after which he would send for a government surveyor, whose fees, and those for registering the land, he would have to pay. The land itself cost him nothing. But there remained the cost of improvement. The *Hevea* rubber tree is scattered through dense forests and *estradas* (paths or roads) have to be cut, through which the *seringueiros* go from tree to tree, after trained explorers have first located the trees. There is a further outlay for shelter for the manager and the working force, for rubber collecting implements—and the inevitable "store." The better-managed *seringaes* to-day are equipped also with cattle.

The typical owner of a *seringal* is a Brazilian with pride of birth and some capital, who, in case of success for a few years, becomes an *aviador*, when he is both a producer of rubber and a merchant on a considerable scale. The next step is to retire from business and spend the remainder of his life in Paris or Lisbon. He sells out before leaving Brazil, and the *seringaes* are transferred at a good round price—not for the land, *per se*, but for improvements.

OPERATING A "SERINGAL."

The *seringal* owner does not, as a rule, hire laborers or pay wages. He has opened so many *estradas*—each with say 100 rubber trees—and plans to have so many men at work tapping trees and smoking latex. Each man's product is weighed periodically, and credited to him on the books of the *seringal* store, whence he obtains clothing, food and any luxuries in which he may indulge. The general credit is two-thirds of the prevailing market rate for rubber, *i. e.*, 4 milreis per kilogram if rubber has been selling at 6 milreis.

When the year's product is shipped down the Amazon it goes direct to the *aviador* (consignee) at Manàos or Pará who has "provisioned" the *seringal*, and usually is sold at once, at the prevailing price. It may be that the *seringal* comes out ahead, or that it remains in debt to the *aviador*. But the rubber workers have already been paid—not in money, but in book credits. If any have been thrifty there may be something due them at the end of the year, but as a rule, the workers are seldom out of debt, and one may not leave any *seringal* on the books of which there is a charge against him.

The *aviador*, by the way, is the merchant from whom the rubber importer of Liverpool or New York buys supplies for his customers. No American or European rubber importer has any capital invested "upriver."

The profit of the *seringal* comes from the store. The rubber gatherer is credited with two-thirds of the selling price of his product; the other third does not more than pay expenses of management and shipping charges. But the store! I have heard it stated that—

An importer of European goods at Pará charges a profit of 50 per cent. to the *aviador;*

The *aviador* charges the *seringal* owner 50 per cent;

The *seringal* owner charges 100 per cent.

SAN ANTONIO—HEAD OF STEAM NAVIGATION ON THE RIVER MADEIRA, BRAZIL.

[Here the steamers take on the Bolivian rubber floated over the falls of the Madeira. The Madeira-Mamoré railway now being constructed is designed to convey such freight around the falls to San Antonio.]

In good years fortunes are made under this system, but the risk involved is so great as to justify locally the scale of profits quoted. But even in the worst years rubber continues to come down the Amazon, and every year sees its procession of retired rubber traders going to Europe. But the *seringueiro* remains on the ground, caring not for Europe, or what rubber is used for, but content only with the supplying of his small daily wants, with no idea that he will ever be free from debt to his partner—the man who runs the *seringal*. For, as I have said, the *seringueiro* is not a hired laborer. He gathers rubber in *estradas* owned by a capitalist and is paid with merchandise from the capitalist's store. In times of high prices the laborer may become extravagant; when prices drop his credit at the store is limited.

It is not to be wondered at that in many cases a *seringal* becomes the property of an *aviador* who has provisioned it. In fact, perhaps most of the better rubber properties are now thus owned. In the event of the new syndicate law becoming effective, the *aviadores* of Pará might enter the list of exporters, since they are "owners" of rubber properties within the meaning of the law. These merchants own not only all the *seringaes* on certain rivers, in addition to stores in the principal towns, but also steamers and launches which, if assembled, would make a formidable fleet. This new régime means a gradual consolidation of rubber properties, the effect of which will be accentuated in time by the existence of the new banking facilities already mentioned.

RUBBER IN THE FAR EAST.

And now about the competition of Ceylon and the Malay States as producers of rubber of a type produced in the past

A *SERINGAL* ON THE RIVER JURUA, IN BRAZIL.

[The buildings are mounted upon posts high enough to protect their occupants in the season of the overflow of the river.]

only in the Amazon region. To my mind the British investor in rubber labors under a great mistake in regard to Brazil, not unnatural in view of the failure of London companies organized to exploit forest rubber. But the managers sent out from London have attempted to control the business on London ideas, without recognizing the possibility of learning from the Brazilian. In Ceylon the Britisher is at home, and his rule is supreme; he has no competitor there; he produces rubber and sells it at a profit. The wish being father to the thought, he indulges in visions of the ignorant Brazilian native, with his lack of system, gradually being forced out of the business of producing rubber, after which the Far East will have a monopoly. "We can grow rubber at a shilling or less a pound in Ceylon," they say; "can you beat that in Brazil"?

No man to-day knows the *cost* of a pound of rubber in the Amazon country, either on one *seringal* or in general. In a land where no money circulates this man or that taps so many trees, cures his rubber, and gets from the *seringal* store enough to eat, some clothes and tobacco. The cost of rubber does not interest him; its selling price is nothing. So with the proprietors: the world needs rubber, and in a few years trading in it brings him a fortune.

DR. JOAO COELHO.
[Inaugurated Governor of Pará February 2, 1909.]

But suppose rubber prices should drop in half—something of which at present there is absolutely no indication. On the thousands of carefully laid out *seringaes* of the Amazon are millions and millions of mature and productive trees, yielding rubber which has never been wholly equalled elsewhere in the world. They are owned by people who have capital, and are skilled in business and adaptable to circumstances. While temporarily lower prices may disturb business conditions, a permanently lower level would mean simply that the *seringueiros*, still in goods, would be credited with, say, 2 milreis instead of 4 milreis per kilogram on the books of the *seringal;* they might become less extravagant, and the proprietor might lessen his rate of profit on the goods dispensed; but so long as the trees are here and the rubber workers on the ground, there will be capital available whereby the natives will be able to sustain life by their labor, the capitalists will profit, and the government will derive revenue from the business. The consolidation of the business of *aviador* and *seringal* owner is a step toward the possible new condition.

Another point is that the ability now of rubber producers to store their product when prices are unfavorable, thus rendering the market more stable, will lessen the risks involved in rubber trading, and the necessity for "long" profit on goods. But more than this: With such returns as have been obtainable from rubber in the past, little thought has been given to other production. Why trifle with growing food when it can be imported, with the world eager to throw money at Brazil for rubber? All hands, then, to collecting rubber, and when the rivers rise and stop rubber work they can live from the store supplies until next crop season. Already, however, on the better *seringaes* cattle have been introduced for the supply of meat and crops are being cultivated to take the place, in part, of imported food.

I have not figured out here the cost of a pound of forest "Pará" rubber; the difficulty of doing this is, I think, plain. But the reader who has entertained any idea of the disappearance of rubber gathering from the Amazon country may find in my article reason for less confidence on this score.

GUSTAV HEINSOHN.

Pará, May 19, 1909.

PICTURES FROM THE RUBBER COUNTRY.

ALBUM DO RIO ACRE. EMILIO FALCAO, EDITOR E PROPRIETARIO, Pará, Brazil. 1906-07. [Lisboa: Typ, "Annuario Commercial."] [Cloth. 13" x 10". 127 full page photogravures, on separate leaves.]

ALBUM DO ESTADO PARA. MANDADO ORGANISAR POR S. Ex. o Snr. Dr. Augusto Montenegro, Governador do Estado. Oito annos do Governo (1901 a 1909). Paris: Chaponet. [1909.] [Cloth. Large 4to. Pp. 350.]

THE remarks by our contributor this month on the extent to which the rubber trade in the Amazon regions has been reduced to system are supported by the two publications of which the titles are given here. It still is customary to speak of the rubber areas there as "remote" and difficult of access, and to an extent they are. But it does not follow that they are outside of civilization. The Acre district—formerly Bolivian and now owned by Brazil—has been regarded as particularly wild. It does lie further from New York or London than almost any other *Hevea* rubber territory, and it has been developed at all only in recent years, and these facts render the more notable the "Album do Rio Acre."

Here we have a sumptuous volume illustrating the resources of the Acre, with the aid of a great number of photographs on a large scale. One *seringal* after another is shown—nearly a hundred altogether—in pictures nearly as large as this page, not to mention river views in general, steamers, cattle farms, villages and the like. True, there is not much to show in a picture of a rubber camp; little money is devoted there to architectural effect or to decoration of any kind. Still it is informing to see views of rubber "farms," which have a definite place on the map, together with names of their proprietors and details of their output. The presence of cattle and goods warehouses points further to the profitable nature of the business carried on. One of these views, by the way, is that of a *seringal* far up the Acre, whench came a large "ball" of rubber mentioned lately in THE INDIA RUBBER WORLD as having been put on exhibition in a store window on Broadway. In that report even the names of the workers who prepared the rubber could be given. With such an "Album" at hand the most remote rubber fields seem comparatively near.

* * *

THE "Album do Estado do Para" is an even more superb publication. It is more comprehensive, too, being in a measure a review of the eight years of administration of Dr. Montenegro, whose service as governor of the State ended in February last. It is a summary of conditions in the State and city of Pará, indicating the progress made during eight years. Besides views of public and private buildings and portraits of eminent citizens, there are several hundred illustrations designed to inform the reader in regard to rubber gathering, grazing, and the agricultural interests of the State. Many *seringals* are thus pictured, an opportunity never being overlooked to put the cattle well to the foreground, thus indicating a disposition on the part of the proprietors to diversify their interests.

The work on Pará embraces historical summaries, the state

constitution, the land laws, an account of the natural resources, and commercial statistics. In fact, it would seem to omit no class of information which either a citizen or an outsider might desire in relation to the state or the city. And since rubber figures so largely in the life of the people there, this is really a book on rubber and its sources and the conditions of its supply. The text of this work is printed in Portuguese (the language of the country), French and English. The work as a whole is of the highest type of book making in France.

DEATH OF BRAZIL'S PRESIDENT.

THE president of Brazil, Dr. Affonso Augusto Moreira Penna, died at Rio de Janeiro on June 14, in his sixty-second year. He assumed the presidency, for a term of four years, November 15, 1906. He was born in the state of Minas Gerales, received a liberal education, became governor of his state, and later held a portfolio in the imperial ministry. He was one of Dom Pedro's cabinet who accepted and supported the republic after the proclamation. He was vice-president of the republic at the time of his election to its highest office. President Penna contributed largely to the improvement of the national finances. He was favorable to the increase of trade between his country and the United States. His term will be filled out by the vice-president, Dr. Nilo Pecanba.

President Penna's last public paper was his message to the national congress, presented on May 3. It was a record of material progress during the year and of improved relations with foreign powers. He expressed satisfaction at the operation of the new system, inaugurated under him, of maintaining a fixed rate of exchange. This has resulted in great benefits throughout the republic, and likewise has been of benefit to traders in Brazilian rubber in whatever market. Speaking of Rio the president said: "It is a fact, happily beyond dispute, that yellow fever has no longer an epidemic character in our midst." The same can be said of most other Brazilian ports now, and this is almost as useful a conquest as that achieved over the instability of the exchange.

APROPOS OF CHICLE.

THE International Gum Co., was incorporated May 25, 1909, under the laws of Maine, with $500,000 capital, authorized to engage in the chewing gum trade. Francis Baumer, of No. 35 East Twenty-eighth street, New York, is president and treasurer. The other directors are Robert S. Muller, Marcel Mulet, Ethel P. Mulet and Dwight Patterson, all of New York.

The Federal Chewing Gum Co. (Brooklyn) and the Bon Bon Co. (New York), manufacturers of chewing gum, have been granted by the government an allowance of drawback on gum made by them with the use of imported chicle and cane sugar. The allowance shall not exceed 10.3 per cent. of the net weight of the exported product for the chicle and 67.56 per cent. of such weight for the refined sugar.

Mexican exports of gum chicle for two fiscal years (ending June 30), according to official returns, were as follows:

	1907-08.	1908-09.
To Germany.....*pounds*	689	2,130
To United States	4,009,984	4,436,329
To France	88	99
To Great Britain	2,548	41,263
To British Honduras	752,006	569,681
Total	4,765,315	5,049,502

CHARLES R. FLINT IN CHICLE AGAIN.

THE organization is reported of a new combination in the chewing gum trade, on the lines of the American Chicle Co. The idea is to consolidate in the Sen-Sen Chiclets Co. five important independent concerns, with a capital of $6,700,000, consisting of $2,700,000 in bonds and $4,000,000 in stock. The companies named are *T. B. Dunn & Co.*, Rochester, New York; *Frank H. Fleer & Co., Inc.*, Philadelphia; *Somerville & Co.*, London, Canada; *Curtis & Son*, Portland, Me., and *The Grove Co.*, Salem, Ohio. T. B. Dunn, head of the first-named company and treasurer of New York state, and Frank H. Fleer, also named above, have consented to act as respectively president and chairman of the board of the new company. The Dunn company makes the "Sen Sen" chewing gum and the Fleer company the product called "chiclets." The promotion of the company is in the hands of Flint & Co., No. 25 Broad street, New York, which includes Charles R. Flint, who, it will be remembered, promoted the American Chicle Co. in 1899.

The new company is to be incorporated under the laws of Maine. It is stated that shareholders and directors of the American Chicle Co. have subscribed liberally to the underwriting of the new company. The earnings for five years of the five companies to be merged are stated to have averaged nearly $425,000 annually. American Chicle dividends are now 6 per cent. on the preferred and at the rate of 18 per cent. on the common.

REVOLVING PORTABLE ELEVATOR.

THE illustration here relates to an apparatus which has been designed to fill the need for a simple, strong, easily handled, portable elevator. With little labor and in little time, and with no danger of breakage, this elevator lifts merchandise weighing up to 1,200 pounds, raising it to any required height up to 10 feet. Every bit of space may be used from floor to ceiling, which is not the case where step ladders, planks, and the like must be used in putting goods in place. This elevator is built entirely of steel and iron. The platform revolves on a ball-bearing base and therefore can be swung around with ease at any point when loaded or unloaded. It is easily operated by one man. The platform is equipped with rollers. The elevator may be easily wheeled through narrow aisles, in which it can be turned like a truck. It can be operated in a 4-foot aisle and loaded and unloaded from front, back or either side. It requires but one man to raise a package 1,200 pounds in weight, 10 feet up, showing a great saving in labor. The illustration shows the machine being used to tier 700-pound bales in a dry goods warehouse in New York. [New York Revolving Portable Elevator Co., Jersey City, New Jersey.]

REVOLVING PORTABLE ELEVATOR.

LEATHER AND RUBBER HEELS.

A NEW way of applying rubber to heels was seen recently on women's shoes. The plan is to have the heel half rubber and half leather, but to have both rubber and leather come next to the ground or to the point of wear.

The top-lift is thus divided. Most of the heels made this way have the rubber on the outside of heel. As a rule the rubber is built a trifle higher than the leather, and the effect is to throw the weight over to the inside of the shoe and cause the whole heel to wear squarely.

The Deresination of India-Rubber—III.

By H. O. Chute.

UTILIZATION OF EXTRACTED RESINS.

IN any system of deresinating rubber on a large scale there will be a certain quantity of by-product in the shape of extracted resin, according to the quality of the material treated, and the question of the utilization of the resin appears to be well worth study.

PONTIANAK RESIN.

In the case of Pontianak gum ("gutta-jelutong"), the weight of the resin extracted amounts on an average to about three times the amount of merchantable rubber produced, and the possibility of selling the resin at any price approaching that to be obtained from the rubber would be of great interest, but at present there seems to be little hope for this. In fact, the outlook for utilization of these resins at any price which will materially lower the cost of producing deresinated rubber is almost blank. The resin extracted from Pontianak resembles in many ways the ordinary rosin or colophony rosin, though it differs in several other respects. As extracted from the solvent it usually occurs as a white mass with small grains tending to powder but not of crystalline structure, and it melts above the boiling point of water, and when thoroughly melted and cooled it forms a hard, dark vitreous mass, much resembling the ordinary rosin of lower grades. It differs from rosin, however, in two important particulars: First, it does not unite with alkalies to form soap, and, second, on distillation, it does not yield oils which have the valuable property of hardening with lime. These two defects prevent its use for soapmaking and resin oil distillation, which are the two industries in which the most rosin is consumed.

Rosin is largely used in cheap varnishes, and Pontianak resin has been tried for this purpose, but has the one defect of rosin, in that it cracks under changes of temperature and is also slightly tacky.

Probably the principal efforts towards using Pontianak resin have been made with a view to substituting it for chicle in the chewing gum industry. In the June issue of THE INDIA RUBBER WORLD (page 31) was an article showing how chicle, which is the basis of chewing gum, has steadily risen in consumption until, at the present time, after washing and cleaning the chicle and allowing for shrinkage, it costs the manufacturer about 65 cents per pound when ready for use. Any substitute for this costly material would be gladly welcomed, but Pontianak resin has several disadvantages. As the resin is produced it is contaminated with crude petroleum oil, which seems present in all Pontianak rubber placed on the market, and the odor of crude oil is most persistent and unpleasant. Another objection is that there are usually to be found in the resin small pieces of rubber which appear as black specks, and also grains of sand. The rubber particles cause the resin to darken when melted, and these have also been objected to by makers of sealing wax who have used the resin, as the odor of burning rubber is not pleasant to users of the wax. Probably these impurities can be eliminated by chemical treatment, but at considerable cost.

Notwithstanding these difficulties Pontianak resin has been used with some success, as one producer claims to have sold 400 tons to a single varnish company, and carloads to several others, and the companies who have used it assert that after a year's test they find the varnishes with the resin in them in better condition than those without.

The following data relating to Pontianak resin are furnished by one of the large producers to those in the trade who are likely to consume the product:

Solubility.—Soluble in 3½ parts of naphtha and in turpentine, linseed oil, and similar solvents about the same. Soluble in boiling alcohol and crystallizes out on cooling.

Melting Point.—About 220 deg. F.

Moisture and light boiling oils (residual naphtha) can be eliminated by heating to 400 deg. F. till froth disappears.

Hardening.—Will not saponify, so that the lime method will not work.

Mixing With Other Gums.—Can be mixed with other varnish gums, waxes, or paraffine in any proportion and dissolves the gelatinous product formed by overheating Chinese wood oil, and with linseed oil gives flexibility and toughness to coating.

Solutions.—All solutions give some residue on ageing, leaving solutions bright and clear. A straight resin varnish has a slight tackiness but coatings softened with linseed oil are free from this feature, and the coatings are inert to chemical action and stand exposure to the weather. It is non-porous and therefore waterproof and materially improves weathering qualities of paint and varnish and it has a body which gives great covering power.

Overheating.—At temperatures of 500 deg. F. and over the resin begins to decompose with formation of acetic acid, but below this temperature it is neutral.

Color of Solutions.—It is very light in color in solution and is further lightened (while liquid) by sunlight, but long overheating darkens the resin.

The above data would indicate that Pontianak resin would find some use as an ingredient in paints and varnish, but it is to be remembered that rosin has most of the qualities enumerated above and that at present prices a grade corresponding in value can be obtained for 1¼ cents per pound. At this price, assuming that 10 pounds of raw Pontianak would give one pound of rubber and 3 pounds of resin the value of the resin would be 3¾ cents for each 10 pounds or, say, ⅓ cent per pound on the raw gum, which is not very much on a product worth 5 cents.

GUAYULE RESIN.

With regard to the resin from guayule rubber the case seems even less promising, so far as getting any price for the resins which will materially add to the profits of the operation of deresination, for only one pound of resin is produced for 3 pounds of crude rubber treated.

The resin is altogether different from that of Pontianak gum, being black, or at least quite dark, and liquid or tarry at ordinary temperatures and of exceeding stickiness, but it hardens or vulcanizes with sulphur, while the resin of Pontianak seems unaffected by sulphur at the ordinary vulcanizing temperature. The data given below are derived from the same sources as what has been quoted in regard to Pontianak resin:

Solubility.—Guayule resin is readily soluble in all the solvents of the Pontianak product and slightly soluble in alcohol. But all the solvents leave a finely divided residue of wood fiber which will settle on standing.

Qualities.—Its chief characteristic in mixtures is to increase flexibility and elasticity.

Saponification.—It will readily saponify and can be used as a substitute for or to dilute saponifiable oils, such as castor oil. Its soaps of lime, aluminum, sodium, lead, etc., are of interest but have not yet been investigated.

The above summary of the qualities of guayule resin seem to indicate that perhaps its property of saponifying should be further investigated and may lead to useful applications and should be further investigated.

Its exceeding stickiness would indicate that perhaps it would be of value in flypapers, belt dressings and the like, and it will stand exposure to the atmosphere for a remarkably long time without showing any signs of hardening.

At present there cannot be said to be any fixed quotation

for either of these resins. Within a year Pontianak resin has been offered in the crude wet state as low as $15 per ton, but the dried is usually quoted at 3 cents per pound in bags, although the purified and deodorized article suitable for chewing gum is held as high as 28 cents per pound. Guayule resin is quoted at 2 cents per pound.

While the above record is mostly one of failure in the utilization of resins derived from rubber, it is of value as showing what has heretofore been done along this line, and others need not waste effort on the same lines. It must be remembered, however, that the reason for the deresination of rubber is that the characteristics of the resins are undesirable by rubber manufacturers, and it is not surprising that they should be found undesirable in other industries. Everything has its place, but the place for the resin is not in the rubber, and the principal object of deresination is to improve the rubber.

New York, June 18, 1908.

The Editor's Book Table.

THE MANUFACTURE OF RUBBER GOODS. A PRACTICAL HANDbook for the Use of Manufacturers, Chemists, and Others. By Adolph Heil and Dr. W. Esch. English Edition by Edward W. Lewis, A. C. G. I., F. C. S. - - - London: Charles Griffin & Co., Limited. Philadelphia: J. B. Lippincott Co. 1909. [Cloth, 8vo. Pp. VIII + 237. Price, $3.50.]

MANUEL PRATIQUE DE LA FABRICATION DU CAOUTCHOUC et des Produits qui en Dérivent. Par Ad. Heil et Dr. W. Esch. Traduit de l'Allemand par E. Ackermann. Paris: Ch. Béranger. 1909. [Paper. 8vo. Pp. 283. Price 12.50 francs.]

THE general scope of this work was treated in a review of the original edition, in German. [See THE INDIA RUBBER WORLD, July 1, 1907—page 307.] The preface to the English edition, just now brought out, states that the late Dr. C. O. Weber had promised a companion book—in the shape of a comprehensive treatise on the manufacture of rubber goods—to his standard work, "The Chemistry of India-Rubber," but this was prevented by his lamented death. Later, when the German book "Handbuch der Gummiwarenfabrikation," by Drs. Heil and Esch appeared, the publishers of Dr. Weber's book realized the utility of an English edition, which has been prepared by the chemist of a long-established rubber factory in London. The work embodies a concise account of the sources of the raw material and of its treatment through the various stages of preparation in the factory, and the manufacture of the leading kinds of goods. The text is supplemented by upward of 100 illustrations. So far as machinery is concerned the types illustrated are mainly German, but the editor has so modified the original work as to adapt the text to the factory equipment and processes more generally in use in Great Britain and America.

Regarding the compounds ("Die Mischungen") the authors say: "No claim is made that these mixings are possessed of any general importance, as they can of course be modified in a great variety of ways." In the review in these pages of the original edition it was said: "The importance of proper compounds is nowhere lost sight of, and nearly a hundred typical mixtures are given in the book. Of course a book of compounds alone will not make a rubber factory superintendent any more than a 'cook book' will make a chef; still, before making up rubber goods one must know what to put into them, and an idea of what proportions have proved successful in practice is helpful."

It may be worth while to consider to whom a book of this class may be of interest or value. The rubber manufacturer who possesses a practical knowledge of the industry or the experienced factory superintendent or chemist may not require such a work as a guide in his work, but we take it that there is no one who is so expert in the industry as to be unable to learn something from the result of the studies of such practical men as the authors of this work. Such a book also may be of interest to a man who is interested actually in one branch of the rubber industry, and who may wish to improve his knowledge of other branches. Likewise it may be commended to the beginner in the industry who may be interested in looking beyond the routine tasks set before him, in the desire to know more of what the rubber manufacture embraces than he is able to see in his daily work.

One indication of the esteem in which this book is held is the fact that it has appeared in a French edition, the title of which is stated above.

ZIELE, RESULTATE UND ZUKUNFT DER INDISCHEN FORSTwirtschaft. Inaugural-Dissertation zur Erlangung der Doktorwürde einer Hohen Staatswissenschaftlichen Fakultät der Eberhard-Karls-Universität zu Tübingen. Vorgelegt von A. H. Berkhout aus Wageningen (Holland). Tübingen: G. Schnürlen. 1909. [Paper. 8vo. Pp. v+190.]

THIS thesis, for a doctor's degree from the university of Tübingen, Germany, on the aims, results and future of forest economy in India, is by Mr. A. H. Berkhout, late conservator of forests in Java, in which position he studied the principal india-rubber and gutta-percha species. In the work before us no less than 33 pages are devoted to the culture of these species, principally in the Far East.

FROM A REVIEW BY E. DE WILDEMAN.

"In his conclusion Professor Berkhout states that it will be necessary for the head forester to receive his education in Europe and, after having acquired a broad general knowledge of his science, he should commence to practice his difficult profession in the tropics and that he should attempt to carry out its application along new paths. As our author states, those governments which are at the head of colonial forests have an interest in sending out well-instructed foresters, for it will only be by doing so in a methodical manner that it will be possible to make the forests regularly productive. Professor Berkhout considers, and justly so, that the science of colonial forestry will from day to day play an important role in the national economy of all civilized countries. Dr. Berkhout's book contains, as might be judged, considerations and very general information which all colonial governments might make use of; the well-known ability of the Wageningen professor lends particular weight to his observations."

DIE NUTZPFLANZEN UNSERER KOLONIEN UND IHRE WIRTschaftliche Bedeutung für das Mutterland. Von D. Westermann. - - - Berlin: Dietrich Reimer (Ernest Vohsen). 1909. [Cloth. 8vo. Pp. 94 + 36, colored plates. Price, 5 marks.]

NOWHERE is the development of colonial resources carried on with greater system and more energetically than in the dependencies of Germany in Africa. This compact, but at the same time very complete, work on the useful plants in those colonies, and their economic importance to the mother country, devotes not a little space to rubber yielding species, from which the various colonial administrators evidently hope for large ultimate returns. The rubber plants described in this volume include *Kickxia elastica, Manihot Glaziovii, Ficus elastica, Hevea Brasilensis* and *Palaquium gutta*—of all of which illustrations are given colored to nature—and several others. The list of species treated, however, is limited chiefly to those which have been placed under cultivation in the German colonies.

IN CURRENT PERIODICALS.

ZUR Kenntnis des Milchsaftes von *Kickxia Africana*. By Dr. E. Fickenday.—*Der Tropenpflanzer*, Berlin. XIII = 5 (May, '09). Pp. 203-208.

Le *Chitandra orientalis* dans la Guinée Francaise. Coagulation de son latex. By Aug. Chevalier, = *Journal d'Agriculture Tropicale*, Paris. IX-95 (May 31, '09). Pp. 129-131.

L'Origine Botanique du Caoutchouc de Nouvelle-Calédonie. By M. Dubard. = *Journal d'Agriculture Tropicale*, Paris. IX-95 July 31, '09). Pp. 135-137.

Rubber of *Sapium Jenmani* from British Guiana. [Description and analysis.] = *Bulletin of the Imperial Institute*, London. VII-1 (1909). Pp. 1-7.

Progress of Rubber Planting.

LANADRON ESTATES RESULTS.

THE proceedings at the first annual meeting of Lanadron Rubber Estates, Limited (London, May 28), were of real interest from whatever standpoint considered. The Lanadron company has been organized by the Messrs. Pears, of soap fame, to work the rubber estates started by them in the Malayan state of Johore, where they had already become cultivators on a large scale of cocoanuts as a source of soap material. This rubber plantation has become widely known by reason of the marketing of its product, largely in "block" form. The company's output of rubber during 1908—the period covered by its first report—was 181,156 pounds, against 97,203 pounds from the same estates the year before. The cost of the rubber sold is estimated at 1*s.* 3*d.* [=30 cents] per pound, which figure is expected to be considerably reduced as the output increases. The average price realized was 4*s.* 6¼*d.* [=$1.10] after deducting freight, landing and sale charges. The expenses of the company include the upkeep of rubber not yet produced. The net profit, derived entirely from the sale of rubber, was £25,621 2*s.* 11*d.* [=$124,685.41], out of which was paid a dividend of 10 per cent. on £234,032 10*s.* capital. It was stated at the meeting that 10 per cent. could have been paid had the rubber realized only 3*s.* 11¼*d.* [=96 cents]. A director said: "When you bear in mind that the results in the accounts before you have been obtained from trees which on December 31 last only averaged 7½ years, and that we are only tapping one-eighth of our planted area, I think you will agree that there are great possibilities in front of us." It may be of interest to note that the rubber output last year was obtained from 567½ acres, or an average of 319 pounds per acre. The net profit reported works out at $219.90 gold, per acre. The chairman of the company called attention at the meeting to the valuable assistance of their consulting chemists in their endeavor to produce the very best rubber possible. The management of the company have decided to confine their tapping of *Hevea* rubber in future to trees which have attained a girth of 24 inches at 3 feet from the ground.

The proceedings at the Lanadron meeting included some remarks by a well-known London broker of such interest, in connection with plantation rubber, as to justify their being quoted here in full.

A LONDON RUBBER BROKER'S VIEWS.

Mr. Andrew Devitt (of Messrs. Lewis & Peat): "Before the resolution is put I would like to make one remark upon the quality of the Lanadron rubber. We have had the privilege of being the brokers to the company for selling the rubber from the commencement. Mr. Pears has, by his skill and cleverness, brought this rubber and kept it up at the top of the tree. There is no rubber like it sold, although attempts have been made by very clever people, both in Ceylon and the Straits, to come up to the Lanadron block, but so far without success. When the price of fine Pará was about 5*s.* 4*d.* to 5*s.* 5*d.* we sold this Lanadron rubber for the company at 5*s.* 9*d.* To-day's value is 5*s.* 10*d.* [=$1.41.9], as near as possible, and fine Pará has risen to 5*s.* 7*d.*

"The point is this, that so far as we can see—and we do a good deal of business in rubber, both fine Pará and other sorts—there is very little chance of seeing rubber prices lower, at all events for this year. Consumers and manufacturers all over this country, the Continent and America, are clamoring now for plantation rubber who some little time ago were afraid to touch it, were suspicious of it, and made all sorts of difficulties which they were afraid of. All those fears have been dispersed and dispelled, and now we can sell Lanadron block without it being seen, for three and six months ahead, and on its character. I think it is a proud proposition for the Lanadron company to be the pioneers who have outstripped all other rubber companies, and to produce an article which, at the present time, is the best quality and commands the highest price of any plantation rubber that comes here.

"With regard to the prospects of prices continuing or being likely to go back, I may tell you that we have to-day had orders for plantation rubber for delivery or shipment from the East up to the end of this year, which is seven months, at 5*s.* 7*d.* [=$1.35.8] per pound. That will show you what manufacturers, consumers and dealers think of the prospects of rubber, or else they would not be willing and eager to make contracts for six months ahead at such a price as that. Pará rubber is in a peculiar position, and holds good prospects for those interested in plantation rubber; but they must not be disappointed if they see the price—I do not say of Lanadron block—if they see the average price of plantation rubber below that of fine hard Pará. It is not because fine hard Pará is better, because we all know that plantation rubber is far superior; but at the present time manufacturers have not been able to adapt their machinery, their mixing or their dressing to take plantation rubber for certain purposes; so that they must have fine Pará.

"Although the crop of fine Pará is a fair one—there are 40,000 tons from the Amazon this year—there is not enough to go round, and therefore the price of fine Pará is steadily creeping up. We have done business to-day at 5*s.* 7*d.* per pound before I came to this meeting. Only once during the past three or four years has that price been reached or passed, although it did touch 3*s.* 8*d.*; but it looks very much more like going to a record price than down. I must add a word of praise at the magnificent way in which the work on the estates in the planting, preparation and tapping of rubber has been carried out."

PLANTATION "FLORIDA," CHIAPAS, MEXICO.

[Property of Wisconsin Rubber Co., Madison, Wisconsin. Five gallon tins used for collecting latex, which is strained before coagulation.]

THE VARIETIES OF "CASTILLOA."

HENRY PITTIER, connected now with the United States department of agriculture, writes in *La Chronique Coloniale*, of Brussels:

"One fact which the interested public persists in ignoring and which, however, has been scientifically proved, is the large number of *Castilloa* species—a number which considered from the standpoint of cultivation is not without some importance. Up to the present time one species of *Castilloa* producing caoutchouc has been recognized generally, viz., the *C. elastica*, and one other which produces resinous latex which coagulates into a brittle substance, slightly or not at all elastic, the *C. tunu*.

"But, in fact, two very distinct types have been confounded under the name of *Castilloa elastica*, one growing in the semi-arid districts of Central America and the other flourishing in the periodically rainy zones. The first type includes one or perhaps two species, the *Castilloa lactiflua* and *C. nicoyana* of Cook, the second having at least four species: the *C. elastica*, of Mexico; the *C. Costricana* on the Atlantic coast of Nicaragua, Costa Rica and Panama; *C. carinata* of western Colombia, and *C. Ulei* of Brazil and Peru. The choice among these species is far from being an indifferent matter when their cultivation for industrial purposes is considered and which should be governed by climatic conditions of each locality. It is probably a fact that an ignorance of this detail has been the cause of so little success in certain attempts made in the Indies and in other colonies, and future experiments will certainly be more encouraging if this detail is taken into account."

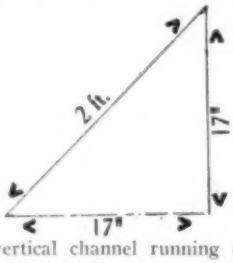
RUBBER PLANTATION ACCESSORIES.

THERE always will be small and medium sized rubber plantations on which it may not pay to put up large coagulating plants. For their use has been assembled on this page illustrations of utensils that have become recognized as desirable parts of a planting outfit, though some of them may prove desirable on even the largest rubber estates. As a rule, the cups and spouts are made of heavy tin; the dippers, bowls and pans of steel enameled with porcelain, and the sieves are made of heavy tin with brass wire strainers. Those shown in our illustrations are made by Walker Sons & Co., Colombo, Ceylon.

RUBBER PLANTATION ACCESSORIES.
["Para" Seamless Latex Strainer in the Center.]

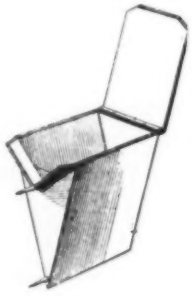
SYSTEM OF TAPPING RUBBER TREES.

AN accompanying diagram relates to a system in which the grooves to be cut in the rubber tree are first worked out, with the distances and angles correct. The guide by which this is effected is a right-angled triangular piece of tin, with two sizes about 17 inches each and the third 2 feet. The grooves to be cut along the sloping side of the triangle will then be at an angle of 45 degrees to the base, each groove 2 feet long and at intervals of one foot, starting from the base of the tree, up to a height of 5 feet, and all leading into a vertical channel running down to within a few inches of the ground level, a small tin spout being inserted at the lower end of this vertical channel to convey the latex into the tin vessels which are placed on the ground near the tree.



A NEW LATEX CUP.

A NEW type of latex cup that has many points in its favor, if it is not too costly, is shown in the accompanying illustration. The method of fastening to the tree and the cover are particularly good, and it should find many friends among the planters. United States patent No. 919,098 has been granted for this invention to James Webster, of Victorville, California.



LATEX CUP.

RUBBER PLANTING NOTES.

AT a special meeting of stockholders of Manchester North Borneo Rubber, Limited (Manchester, May 21), it was voted to increase the capital from £65,000 to £100,000, to provide for increasing the companies area under rubber. The company is planting tobacco largely as a temporary crop.

Rubber Estates of Johore, Limited, began planting in March, 1907, and at the last annual meeting (London, May 4), it was reported that over 3,300 acres had been placed under rubber. The oldest rubber had cost to date about £14 10s. [=$70.56] per acre.

Kautschuk-Plantage Mombo, G. m. b. H., has been registered at Arnstadt, Germany, with a capital of 510,000 marks [=$121,380], to plant rubber at Mombo, in the Wilhelmstal district, German East Africa. It is formed to develop a plantation already started by Robert Trautmann, of Arnstadt, and Gustav Weisflog, of Erfurt, Germany, who are the organizers of the new company.

Mr. H. A. Wickham, who will be remembered in connection with the original introduction of the cultivation of *Hevea* rubber into the Far East, is still active in

connection with rubber interests, as indicated by his share in the organization of Mombiri Rubber Plantations, Limited, with £52,000 capital registered in London, April 20, 1909. The object is to acquire the benefit of a lease granted to Mr. Wickham of an estate in Collingwood Bay, East coast of Papua (New Guinea), to adopt agreements with Mr. Wickham, and to carry on the business of rubber culture. One of the signatories is Mr. Wickham, whose address now is 9 James street, Westbourne Terrace, W., London.

DISTANCE IN RUBBER PLANTING.

THE Tehuantepec Rubber Culture Co. (New York) established their plantation "Rubio" in Mexico, on the plan of setting their rubber 6x6 feet at the beginning, with the idea of thinning the trees later. They issue under date of May 1 a report on experimental thinning, giving dimensions of trees under varying conditions. The report says: "It will be observed that the difference in growth as between plantings at 6x6, 9x9, 6x12, 12x12 and 18x18 is so small as to show no decided advantage in favor of any particular distance between trees, indicating that no general cutting out at this time is advisable." Any further original planting, however, will be done at various distances apart greater than 6x6 feet.

RUBBER YIELDS IN MEXICO.

THE Meriden Rubber Corporation shipped recently from their plantation in Vera Cruz, Mexico, a lot of *Castilloa* plantation rubber, which weighed 568 pounds in New York. The sheet rubber sold at $1 a pound; 25 pounds mixed with scrap brought 97 cents a pound. Neighboring planters shipped 1,782 pounds with the same consignment.

A report on the estate in Mexico of The Tolosa Rubber Co. (Boston), made by W. L. Wadleigh, general manager, states that the tapping of 160 planted *Castilloa* trees aged 6 years and 8 months, and measuring 20 inches or more in girth, yielded 20¼ pounds of dry rubber, or an average of 2 ounces per tree for one tapping. He recommends the tapping, toward the end of this year, of all their trees of this size.

AMERICAN ENTERPRISE IN BORNEO.

THIS paragraph appears in *De Indische Mercuur*, of Amsterdam: "According to information received by the *Java Bode* (Java "Messenger"), an American syndicate is to be organized for the purpose of cultivating caoutchouc on a large scale in the eastern and southern portions of Borneo. Preliminary investigations, such as are necessary in the selection of forest lands best suited, have already been commenced."

RUBBER PLANTING NOTES.

As indicating the rapidity with which rubber estates are reaching the tapping stage, the *Malay Mail* recently mentioned that at that time no latex cups were to be had in Kuala Lumpur, Singapore or Penang. One Kuala Lumpur firm had sold 400,000 cups within a few months.

The Malacca Rubber Plantations, Limited—a company in the flotation of which, in 1905, some Americans were concerned—has become one of the important rubber-producing companies. The March outturn was 12,500 pounds. At recent London auction sales 18,400 pounds of the company's rubber realized an average of 5*s.* 4½*d.* [=$1.30¾] per pound.

The London *Financial News* of May 5 printed a list of 46 shareholders in the General Ceylon Rubber and Tea Estate, Limited, who had recently made transfers of shares. The number transferred was 14,584; the number retained by the same holders was 14,408. The total number of shares issued to date is 125,366. The pertinence of the list of sales is not plain, though it may be implied that some persons prominent in financial circles are unloading their holdings in this particular company.

The Rio Cimmarrones Plantation Co., incorporated under the laws of California, to develop a plantation of rubber, cacao, and tropical fruits, in Mexico, is capitalized at $75,000. The directors are R. C. Shaw, Z. P. Smith, and O. M. Bennett, all of Berkeley, California, in which city the company will have headquarters.

A report on plantation rubber (*Castilloa*) from Colombia appears in the official paper published at Bogotá. It relates to rubber produced by Señores Angel, Ferrer, and Tuluk, whose plantations near Quibdo were mentioned in THE INDIA RUBBER WORLD December 1, 1905 (page 75). The rubber was sent to London, where it was declared to be worth 3*s.* 10*d.* to 4*s.*, with Pará fine at 4*s.* 8*d.*

The Pennsylvania Obispo Plantation Co. (Scottdale, Pennsylvania) report the measurement on their plantation "El Cedral," in Mexico, of *Castilloa* rubber trees 3½ years old from seed, 28½ inches in circumference, 18 inches from the ground. They have about 190,000 trees of this age.

In a recent article on the "maniçoba" rubber plantations of the Brazilian Rubber Plantation and Development Co., of New York, in Piauhy, Brazil [see THE INDIA RUBBER WORLD, May 1, 1909—page 279], the fact was omitted that they cover 728.95 hectares [=1,801.24 acres].

RUBBER GOODS FOR NEW YORK CITY.

THE City of New York, the yearly expenditures of which far exceed those of any other city, is a very considerable buyer of rubber goods, which are required in great variety. In a single recent issue of *The City Record* tenders are invited for rubber goods for the Borough of Brooklyn; for rubber boots and rubber coats for the department of water supply; for rubber insulated submarine telephone cable, for the police department; rubber boots for the bureau of sewers, and so on. Such advertisements appear almost daily through the year. The largest single article of purchase, perhaps, in the way of rubber goods, is hose for the fire department. The city must buy tires for its hundreds of automobiles, in addition to many horse-drawn vehicles and bicycles. The item of rubber stationers' sundries required in the public schools alone runs into a lot of money; likewise the rubber supplies for the city hospitals and charitable institutions.

INDIA-RUBBER GOODS IN COMMERCE.

EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of value of exports of manufactures of india-rubber and gutta-percha for the month of April, 1909, and the first ten months of five fiscal years, beginning July 1:

MONTHS.	Belting, Packing and Hose.	Boots and Shoes.	All Other Rubber.	TOTAL.
April, 1909	$172,124	$67,782	$359,182	$599,088
July-March	1,053,758	1,071,489	2,805,914	4,931,161
Total	$1,225,882	$1,139,271	$3,165,096	$5,530,249
Total, 1907-08 .	1,141,634	1,365,616	3,122,544	5,629,794
Total, 1906-07 .	1,040,560	1,007,935	3,015,892	5,064,387
Total, 1905-06 .	1,035,705	1,360,346	2,369,480	4,765,531
Total, 1904-05 .	794,256	1,100,093	2,064,066	3,958,415

The decline in the exports of rubber goods which occurred during the financial depression some time ago has well nigh been recovered from. The above table permits this comparison to be made of conditions for the past 10 months, as against the preceding period:

Decrease in boots and shoes.....		$226,345
Increase in belting, etc.	$84,248	
Increase in miscellaneous.....	42,462	126,710
Net decrease.....		$99,635

It would appear from the table that the exports of boots and shoes are less stable than in other rubber lines. Thus 1906-07 showed a marked falling off in rubber footwear, while the miscellaneous column showed a gain of more than 27 per cent.

The India-Rubber Trade in Great Britain.

By Our Regular Correspondent.

I REFERRED to this topic a short time ago, but a reference to a new patent connected with spreading, in the May issue of THE INDIA RUBBER WORLD (page 292) suggests that a more detailed reference to the interesting works at Hazel Grove, near Stockport, may not be without interest.

T. GARE'S PATENTS.

With regard to the spreading patent of Gare, and that for making sheet rubber by a new process, I cannot say anything from personal knowledge, but I have seen the first patent for the remaking of solid cab tires, railway buffers, etc., in operation and it is certainly very interesting and to my knowledge novel. I understand that granting of the patent, which is dated December, 1908, was much delayed by opposition from a source of which I have no detailed information. Since then another patent on somewhat similar lines has been granted, though it was opposed by the Gare interests. The process itself, to briefly summarize the patent, consists in reducing the worn but not decayed rubber to fine powder, this being effected on machines which have been specially designed and patented. The rubber powder is fed in at one end of a specially constructed die machine by a hopper and after compression into a solid mass it appears again as a new tire at the other end. Except in the rate of production the process much resembles that ordinarily seen at a rubber works. In Gare's process, though the production of the tire is continuous, it is at a much slower rate. The temperature the rubber is subjected to is from 390° to 400° F., and it is carefully regulated by a thermometer. The tire is rolled up on a drum as it comes from the machine after passing over a bed of French chalk. No other processes are necessary and the tires can be put on the wheels they came from after a very short time. The remade tires have given, I understand, every satisfaction, and as they can be produced at a much less cost than new ones it is evident that the manufacture of and sale of new tires is likely to be adversely affected. The same remarks apply to remade buffers, which appear to give very satisfactory results, both in mechanical testing and in use. In remaking the buffers the ground rubber is compressed in molds by hydraulic pressure and then heated in the molds in a hot-air chamber up to about 400° F. Among other goods being made are horseshoe pads and rubber heels. As mentioned in my former notice, a company with a large capital has been formed to take over the Gare patents, and this company has already issued licenses to three or four British rubber manufacturing firms to use the tire patent. Subsidiary companies are also in process of formation to work the patents in the various colonies, though with regard to these it would seem as if there was not much prospect of large business in some of the cases. It may be mentioned that a somewhat similar patent of O. C. Tunewich, of Finchley, London, dated December 24, 1907, has reference to the manufacture of vulcanite articles from powdered waste vulcanite, this being heated to about 400° F. in a mold. A variation of this process is to use the waste vulcanite in the form of turnings or shavings, a spring being provided to take up any excessive pressure developed during the compression at 400° F.

THE prospectus was issued on May 17 of the Rubber Tanned Leather Co., Limited, with a capital of £250,000, of which

RUBBER-TANNED LEATHER.

£150,000, mostly in shares, goes to the promotion interests which comprise the Rubber Tanning Syndicate, Limited, of London, and the Rubberized Leather Co., Limited, of Melbourne, Australia. The board, whose chairman is Lord Suffield, is more representative of rubber planting than of the leather trade. The reports on the process mostly emanate from those who have tried the new product made up into articles of commerce, though there is a satisfactory report from one firm of tanners. There does not appear to be any report from any scientific authorities on the leather manufacture; at least none such were sent out with the prospectus. The title of the company is to some extent ambiguous. It is not quite clear on the face of it whether the rubber does the tanning or whether the previously tanned leather is treated with rubber in order to make it more waterproof. The main object of the ordinary tanning processes is, of course, to render the gelatine of the soft and flabby hide insoluble by conversion into tannate of gelatine. Other processes, such as the chrome process, have the same result without the use of tannic acid. I am not aware that the gelatine can be fixed merely by treatment with rubber and imagine that some body such as tannic acid or chrome is used in conjunction. This company is, of course, on a different footing to those which have had for their object the substitution of leather by some other product. Various leather substitutes have had a certain degree of success in certain directions, but they have never really threatened the old established leather interests. The new product, however, will, I imagine, come into close conflict with the latter if the claims as to its superiority for boots, driving belts etc., are generally substantiated.

THE Seventh International Congress of Applied Chemistry was opened on May 27 by the Prince of Wales in the Albert

CONGRESS OF APPLIED CHEMISTRY.

Hall, London, and was attended by about 3,000 representatives of 20 different countries, as well as by a number of ladies. From the india-rubber point of view there is not a great deal of interest to record. Several papers, it is true, were put in the agenda, but in only one case did the author appear in person. This absence of authors, indeed, struck me as depriving the congress of an important element of interest. Herewith is a list of the papers on rubber announced in the daily journal of the congress to be read at stated times:

1. Theorie und Praxis der Kautschukregeneration. By Paul Alexander.
2. Die Nitorite der Kautschuk. By Paul Alexander.
3. A Technical Process for Improvement of Low and Medium Grade rubbers. By M. W. Wildermann.
4. India-Rubber in North America. By Henry C. Pearson.
5. Chemie des Kautschuk. By Richard Weil.
6. Besprechung über Kautschuk Analyse. By R. Weil and P. Tenune.
7. The Analysis of Manufactured India-Rubber Goods. W. F. A. Exmen.

Mr. Wildermann proposed to improve inferior rubbers by treatment with alcohol and chloroform to remove resin and certain other constituents. The suggestion was adversely criticised by Dr. H. P. Stevens and it is certainly not easy to imagine it coming into regular application. But there is not space here for further details regarding this or any of the other papers mentioned.

At the closing meeting of the congress the American ambassador, Mr. Whitelaw Reid, read an invitation from the United States government to hold the 1912 Congress in New York. Professor W. Morley was elected honorary president and Dr. W. H. Nichols president, in the places of Sir Henry Roscoe, F. R. S., and Sir William Ramsay, K. C. B., F. R. S.

SOMEWHAT of a novelty in British newspapers is the prospectus of a Canadian company—that of the Canadian Mineral

GILSONITE.

Rubber Co., Limited. This is a development of the American Asphaltum and Rubber Co., working gilsonite and bituminous limestone mines, and its object

is to extend this business to Canada and Mexico. It does not appear that any deposit of gilsonite—otherwise elaterite or mineral caoutchouc—has been discovered in Canada and Mexico, but works are to be erected in these countries to manufacture the stuff into insulating material and to prepare it for other well-known uses, one of which is a so-called flux, in the rubber manufacture. This material has long been known to occur in the limestone of Derbyshire, England, but in too small quantities to make its commercial exploitation likely to prove successful. A quite new department is, however, the establishment of asphalt works at a Derbyshire limestone quarry where the rock contains a good deal of bitumen. There is, however, no such vein of solid bitumen as is found at Utah and has been proved to a depth of 850 feet. [Further details occur in our department of News of the American Rubber Trade.]

The Rubber Interest in Europe.

TO MAKE "ZAKINGUMMI" IN GERMANY.

A COMPANY has been registered at Nordhausen under the style Deutsche Zakinwerke, Actiengesellschaft, with a capital of 500,000 marks [=$119,000], for the purpose of manufacturing and utilizing substances similar to india-rubber, and more particularly "Zakingummi," a substitute invented by Olsson, of Sweden. [See THE INDIA RUBBER WORLD, June 1, 1907—page 268.] The company likewise intends to participate in similar and other enterprises, whenever such participation is likely to be of assistance in the attainment of the company's purposes. The capital has been subscribed for at par by the organizers, Messrs. Robert Petzold, a merchant of Elberfeld; Friedrich Fisher, capitalist; Dr. Paul Schencke, pharmacist; Hermann Rathsfeld, manufacturer; and Fritz Fischer, engineer, of Nordhausen. The directors are: F. Fischer, H. Rathsfeld, and Erich Jäger, merchant. The managers of the company are Robert Petzold, of Elberfeld, and Dr. Paul Schencke, pharmacist, of Nordhausen.

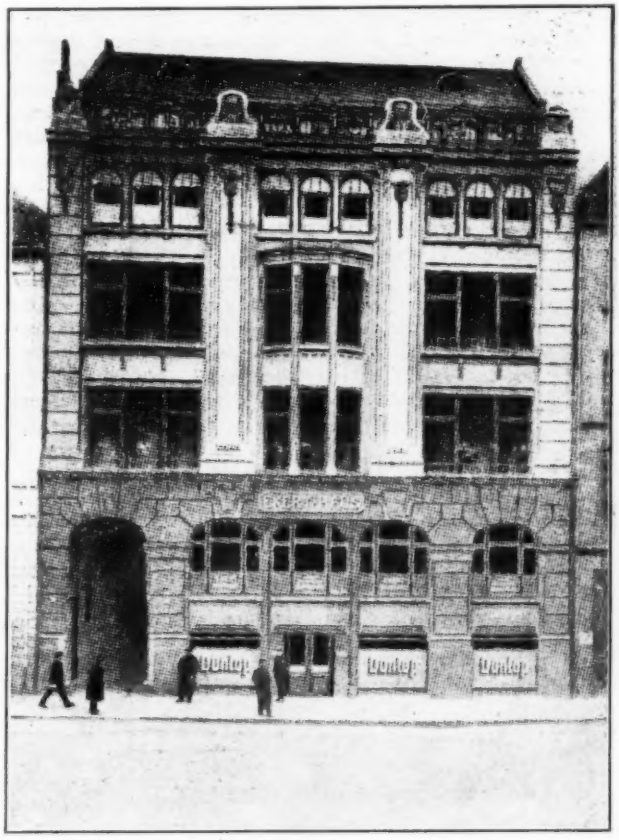
BUSINESS OF METZELER & CO.

AT the last annual meeting of Actiengesellschaft Metzeler & Co. (Munich), the reports for the business year 1908 were approved and a dividend of 5 per cent. declared, as usual. In regard to business during the current year, the meeting was informed that the company had received ample orders and that it still had a stock of crude rubber bought at favorable prices, but that it would have to rely for further supplies on the open market, which is at present unsteady, as soon as the stock on hand had been worked up. The outlook for the business in surgical and technical rubber goods, as well as for the bicycle tire business, was stated to be favorable, while sales of pneumatic tires for automobiles had recently shown a material increase, compelling the works to increase the number of working hours.

AMERICAN RUBBER FOOTWEAR ON THE CONTINENT.

THE Hamburg firm of Ekert Brothers (consisting of Leon, Maximilian and Joseph Ekert), wholesalers of rubber footwear, is the subject of a lengthy article in *Der Schuhmarkt* (Frankfort o/M., June 3). They have devoted their attention largely to the trade in American rubber shoes on the continent. Our contemporary says:

"There was a time when dealers were averse to handling light American rubber shoes, averring that the public was buying rubber shoes according to their weight, considering the heaviest shoes to be the best, and that only a heavy rubber shoe could satisfy the customer. It did not take them long, however, to change their views, after these light, elegant rubber shoes had been given a trial, and within a few years the light weight goods have been most satisfactorily introduced into all the more high-class stores. The demand for the 'Candee' and 'Boston' rubber shoes increased to such an extent that the Ekert firm was no longer able to find room for its stock in leased warehouses, but proceeded to erect a new warehouse, which at the present time always contains a stock of many thousand cases. Assorted according to grades and sizes, the trade finds in this warehouse the goods of the two brands named and the product of several other manufacturing concerns who have granted the Ekert firm the exclusive right of sale in most countries. Inasmuch as the European business is mainly conducted from the Hamburg warehouse, the same contains special styles for various countries, and we believe we may state that the stock comprises 150 different grades of rubber shoes. A few years ago a special sporting goods department was added to the business, and now enjoys a large trade. In this connection we shall confine ourselves to mentioning the widely known 'Scrum' footballs and boots, and the 'Mermaid' tennis shoes, shoes for gymnasts and sandals. In addition to the main warehouse at Hamburg, the firm maintains special warehouses in a number of large German and foreign cities, which place it in a position to promptly meet



EKERT BROTHERS, "EKERTHAUS," HAMBURG.

the demands of its extensive trade. The firm of Ekert Brothers can point to 15 years of successful work, and in view of an efficient force of traveling salesmen and agents, the future extension of the business may be expected to fully equal its development in the past."

THE ANNEXATION OF THE CONGO.

UNDER the auspices of the chamber of commerce at Antwerp, beginning on June 6, occurred a notable "patriotic manifestation" commemorating the annexation of the Congo Free State to Bel-

gium. King Leopold honored the occasion with his presence, and was the recipient of an address from the chamber, in which his influence in the matter of the annexation was applauded, and to which he made a response at length. An industrial parade representing the leading interests of Antwerp and the kingdom followed, and at the close of the day named a banquet was served to 1,400 guests, his Majesty being present. The rubber interest naturally was well represented, among those taking part being M. Edouard Bunge and Willy M. Friling, of Bunge & Co., M. Gustav Grisar, of Grisar & Co., and M. Louis Van de Velde, of L. and W. Van de Velde, leading rubber houses in Antwerp. Our esteemed contemporary, *La Tribune Congolaise*, is to be congratulated upon its interesting special issue brought out for this occasion, with 40 pages and 188 illustrations, in connection with a very full review of the resources of the Congo and the progress of that region under the régime which preceded the annexation.

GERMANY.

THE annual meeting of Frankfurter Asbestwerke Aktiengesellschaft (formerly Louis Wertheim) was held at Frankfurt a/M. on May 15. The net profit for 1908 was 86,731 marks [=$20,641.92], and the dividends declared were 6 per cent.

The dividend of Hannoversche Gummi-Kamm Compagnie A.-G. (the Hanover India Rubber Co.) for the business year 1908 amounted to 22 per cent., against 21 per cent. for the preceding year.

Herrmann & Co., manufacturers of seamless rubber goods in Berlin, and Richard Linke, a dealer at Zittau, have consolidated their business under the style Linke, Herrmann & Co., G. m. b. H.

The dividend of Vereinigte Berlin-Frankfurter Gummiwaren-Fabriken for the business year 1908 was 9 per cent.—the same as for several years past.

GREAT BRITAIN.

THE accounts of Callender's Cable Construction Co., Limited, for the business year 1908 show net profits of £61,614 [=$229,844.53]. The ordinary dividend was paid on the preference shares, and the interest on the debentures, and 10 per cent. on the ordinary shares, with 5 per cent. bonus on the latter. The carry-over is £45,884, against £45,107 last year.

Claudius Ash, Sons & Co. (1905), Limited, makers of dental rubber and other dentists' supplies, report a net profit for 1908 of £89,415. [=$435,138.10]. Dividends were 5½ per cent. on preference shares and 8 per cent. on the common.

At the fifteenth general meeting of the Greenwich Inlaid Linoleum Co., Limited (London, May 26), working Frederick Walton's new patent, the year's accounts showed a net profit of £69,052 [=$336,041.56]. Dividends—5½ per cent. on the preference capital (£100,000) and 15 per cent. on the ordinary (£240,000)—absorbed £41,500; debenture interest, £5,400; added to reserve, £15,000; carried forward, over £6,000. The chairman, Sir William Treloar, J. P., late lord mayor of London, was reëlected.

Rubber Patents, Limited, registered in London, May 18, 1909; capital, £15,000 [=$72,997.50]. To take over the manufacture of footballs, tennis balls and other rubber goods carried on at 9, Charles street, Manchester, under the name Progressive Rubber Co., and also various patented inventions relating to such lines of manufacture.

At the fourth annual meeting of Johnson & Phillips, Limited (London, May 28), showed net profits of £10,037 [=$48,845]. After providing for the appropriations shown in the profit and loss account there remained to be carried over £681, against £6,873 in the preceding year. The unfavorable conditions of the past year were commented on by the chairman, who expressed confidence in any early revival of trade.

Charles Featherstone, of Altrincham, near Manchester, has secured the representation for Great Britain for the hose manufactured by the New York Belting and Packing Co., Limited, and the Eureka Hose Manufacturing Co., of New York.

RUSSIA.

THE net profits of Russisch-Französische Gummi-, Guttapercha- und Telegraphen-Werke in Firma "Provoduik" at Riga, for the last business year reached 1,983,540 rubles [=$1,021,523.10], on a turnover of 21,673,580 rubles. A dividend of 12 per cent. was declared on a capital of 7,000,000 rubles [=$3,605,000].

EARLY DESIGNS IN RUBBER FOOTWEAR.

IN the very early days of rubber shoe manufacture, some quite artistic designs were attempted and produced. The illustration shows some very natty goods made by Christopher Meyer and covered by patents dated nearly 40 years ago. These

ROLL ENGRAVED RUBBER SANDALS.

patents cover the process of making imitation sandals and also the dies and rolls used in forming the ornamented surface.

FACTORY OF THE HANNOVERSCHE GUMMI-KAMM COMPAGNIE, A.-G.
[Important German manufacturers of hard and soft rubber goods; established 1862.]

AERIAL NAVIGATION IN GERMANY.

FROM THE "GUMMI-ZEITUNG," BERLIN.

ALTHOUGH the press has been flooded with notes on Zeppelin's dirigible balloons, very few accurate technical details have as yet been published, with the exception of some articles in the *Gummi-Zeitung* and other trade papers. A lecture delivered last March by Admiral Prince Henry of Prussia before the Verein für Motorluftschiffahrt (Aerial Motor Navigation Society) of Kiel may, therefore, prove to be of interest. We have selected from the lecture the following particulars concerning the airship "Zeppelin 1":

The floating balloon shed at Manzell is built on pontoons, and so anchored that it can be readily turned until its open end faces in a direction opposite to that from which the wind blows. A channel in which the cars find a support runs in the direction of the longitudinal axis of the shed, while batteries of hydrogen tanks, used for inflating the "ballonets,"* are installed in both sides. The airship can be hoisted to the roof of the shed for making repairs.

The balloon proper is composed of 17 separate balloons, all of which are in turn enclosed in one common covering. A 4-cylinder engine, operating two propellers, is installed in each of the two cars. If a person in one of the cars desires to exchange places with a person in the other car, both must proceed simultaneously toward the center of the connecting bridge, so as to preserve the equilibrium, since the airship is exceedingly sensitive to such changes in the distribution of the load. The operating qualities and efficiency of the airship are not only impaired by its inability to overcome the force of the wind when it exceeds 11 meters per second,† but likewise because the propellers revolve at considerable heights in a medium of lesser density which reduces their propulsive power, and that at such heights both the ignition and combustion in the engine are apt to become defective, in consequence of an insufficient supply of oxygen.

During the trip made by Prince Henry, which was of 6 hours' duration, the distance covered was 210 kilometers [=130½ miles], and the airship rose to a medium height of about 260 meters above the level of the Lake of Constance. The consumption of benzine amounted to 210 kilograms, while 36 kilograms of lubricating material were used and 40 kilograms of ballast thrown out. The "Zeppelin 1" recently made a two-hours trip without ballast, the same being replaced with a crew of 24 persons.

The Zeppelin-Luftschiffbau-Gesellschaft (Zeppelin Airship Construction Co.), as well as various committees, are planning a series of regular airship lines between Frankfort and Düsseldorf, and between Friedrichshafen and the cities of Lucerne, Cologne, Munich, and so on. Other plans for the establishment of "airship ports" in Cologne, Lerchlingen and Metz are presumably based on these proposed lines, but there is sufficient reason to doubt whether such enterprises could be made profitable for a long time to come. At present the British are the only ones who see the atmosphere crowded with Zeppelin airships, as proved by the excitement into which timid English minds were recently thrown, when mysterious airships were seen to float over England in the night and induced the British war department to engage in shooting practice with shrapnel using captive balloons as a target. It soon leaked out, however, that these horrifying dirigible balloons were merely 25-foot models of airships made by the English manufacturing firm of Spencer (at the price of 10*s.* 6*d* each), in which an alcohol lamp produced rarified air.

Two new dirigible balloons of German construction have just been announced. Professor Schütte, of Danzig, is building an airship of the rigid type, in which the aluminum frame is to be replaced with a wooden frame in the shape of a coil which is claimed to possess greater strength and to be exempt from dangerous electric charges and discharges. The capacity of this balloon is to be 13,000 cubic meters and four benzine motors of 100 HP. each are to be installed in the two cars.

The second type of construction is the invention of Oberbaurat‡ Rettig, of Danzig, who intends to construct the body of the balloon throughout of light wooden panels, connected by air-tight joints. He has planned to charge this covering or shell with hydrogen without any separate ballonets. Our rubber industry is not liable to suffer much damage from this competition, as it may be safely assumed in advance, as an undoubted fact, that rubber covered or impregnated fabrics are far superior, both as tight gas containers and in strength, to such an immense fragile wooden casing as one of 11,000 cubic meters capacity.

The price list of a new firm, the Aërooffice, of Paris, furnishes some information regarding the prices of airships and flying machines. A small spherical balloon (600 cubic meters capacity) costs from 1,000 marks [=$238], when made of cotton cloth, to 5,000 marks [=$1,190], when made of double rubber-covered fabric. The prices of a balloon of large size (say, 4,000 cubic meters) range between 6,000 and 17,000 marks. A Voisin flying machine of the type used by Farman costs 25,000 marks, and an Esmault-Pelterie aëroplane with 30 HP. engine is listed at 41,000 marks, the price of an Antoinette aëroplane being only 10,000 marks. Following the lead of the Allgemeine Elektrizitäts-Gesellschaft (General Electric Co.), in Berlin, the Benz Motor Works in Mannheim have started to build flying machine engines.

The first step toward the practical introduction in Germany of airships heavier than air has just been taken by the Flugmaschine Wright, G. m. b. H. (Wright Flying Machine Co., Limited), which was recently organized with a capital stock of 500,000 marks [=$119,000], with the participation of the Allgemeine Elektrizitäts-Gesellschaft, the Actiengesellschaft Friedr. Krupp, Ludwig Loewe & Co., and various other corporations and banking houses. This company has acquired the right to work all the Wright patents and all future improvements on the same during a contract term of 15 years in Germany and her colonies, Sweden, Norway, Denmark, Luxemburg and Turkey. Further proof of the efficiency of the Wright bi-plane was recently furnished by Tissandier, one of Wright's scholars, who covered 57 kilometers [=45½ miles] in one hour, during a flight he made at Pau. The flying machine invented by the government architect Hoffmann is now being assembled on the Tempelhofer field at Berlin, and experiments will be made with it in the near future.

REFERENCES.

AERONAUTICS and the Rubber Industry. THE INDIA RUBBER WORLD, October 1, 1908—page 7.

Rubber in Balloon Construction. THE INDIA RUBBER WORLD, February 1, 1909—page 182.

A CEMENT for uniting leather, india-rubber, cloth, wood, and so on, is formed of gutta-percha dissolved in a mixture of carbon bisulphide and ether, preferably in the following proportions: Carbon bisulphide, 1 pound; ether, 4 ounces; gutta-percha, 4 to 5 ounces. The cement may be used in repairing tire tubes and covers, and for uniting parts of boots and the like. This invention is covered by the British patent 28,188 (1907) granted to R. Jensen.

A NEW patent tapping knife used in the East is the "Barrydo," invented by G. S. Brown and made by Brown & Davison (Colombo). Its blade has four cutting edges and is easily reversible; it cuts right and left hand, "pull or push," without adjustment; it cannot choke, and requires no sharpening.

*The sections of which the large balloon of the airship is composed.
†About 25 miles per hour; a good or stormy breeze.
‡The title of chief architects or commissioners of public works in Germany.

Recent Patents Relating to Rubber.

UNITED STATES OF AMERICA.

ISSUED MAY 4, 1909.

NO. 920,216. Tire. [An outer tube and a plurality of resilient inner tubes.] J. C. Taylor, New York city.

920,237. Piston [Packing.] R. Allen, Caversham, England.

920,289. Pneumatic tire. J. W. Earnhardt, Los Angeles, Cal.

920,502. Sheet packing. V. Tompkins, assignor to Smooth-On Mfg. Co., all of Jersey City, N. J.

920,523. Tire. [Cushion.] G. T. Beckers, Los Angeles, Cal.

920,603. Wheel for vehicles. [Multiple pneumatic tire.] E. E. Michelin, Clermont-Ferrand, France.

920,676. Rubber footwear. [Details of a heel of an overshoe.] G. E. Smith, Wellington, New Zealand.

920,690. Resilient wheel. F. C. Thomas, Mill Valley, Cal.

920,699. Shield for rubber tires. D. E. Walker, Indianapolis, Ind.

920,735. Automobile tire. M. Hanford and D. L. Taylor, Malden, Mass.

920,795. Shield for rubber tires. D. E. Walker, Indianapolis, Ind.

Trade Mark.

38,555. The Simplex Electrical Co., Boston. The representation of an insulated conductor with a red thread inserted longitudinally between the insulating layers of the conductor. For insulated electrical conductors.

ISSUED MAY 11, 1909.

921,001. Manufacture of waterproof articles from fibrous materials. I. L. Roberts, Lockport, N. Y.

921,079. Hose shield. G. E. Burtscher, Chicago.

921,148. Process for regenerating rubber waste of all kinds. J. H. L. Neilson, Hanover-Linden, Germany.

921,151. Automobile tire. H. Parsons, Deer Lodge, Mont.

921,174. Pneumatic tire. W. H. Snyder, Kenton, Ohio.

921,316. Rubber roller car fender. W. M. Vallette, San Francisco, Cal.

921,368. Hose coupling. W. E. Crook, Surry Hills, near Sydney, New South Wales, Australia.

921,414. Pneumatic tire. G. L. Kline, St. Louis, Mo.

921,444. Puncture proof attachment for tires. J. B. Oatman, Riverdale, Cal.

921,461. Overshoe. E. P. Rickert, Cleveland, Ohio.

921,538. Waterproof material. [Having in combination a fabric or ply impregnated with a waterproof bituminous composition and a layer or ply of parchmentized cellulose.] J. Glassford, Jersey City, N. J., assignor to Consolidated Waterproof Co., New York city.

921,613. Wheel. H. E. Keyes, Homestead, Pa., assignor to the Triumph Automobile Tire Co., Wheeling, W. Va.

Trade Marks.

41,009. Trenton Rubber Mfg. Co., Trenton, N. J. The word *Thermoid.* For brakes and clutches for motor vehicles.

41,116. Victor Oil and Supply Co., New York city. The letter *V* within a circle under the word *Vanguard.* For rubber and fiber packings and packing rings.

ISSUED MAY 18, 1909.

921,691. Hose coupling. C. L. Friday, Quincy, Ill.

921,710. Pneumatic tire. G. Jacobs, Des Moines, Iowa.

921,936. Anti-skidding device for wheels. R. M. Winsch, Lansdale, Pa.

922,093. Spring protector for india-rubber pencil tips. S. H. Crocker, London, England, assignor to Eagle Pencil Co., New York city.

922,094. Heel cushion for shoes. L. E. Cummings, Pittsburgh, Pa.

922,130. Packing. F. Goetze, Burscheid, Germany.

922,402. Demountable tire rim. A. Dow, assignor to Dow Rim Co., all of New York city.

922,403. Locking device for demountable tire rims. *Same.*

922,404. Demountable tire rim. *Same.*

Trade Marks.

40,208. Hood Rubber Co., Boston. The word *Puritan* in a semicircle. For rubber footwear.

40,209. Hood Rubber Co., Boston. The word *Shawmut* in a semicircle. For rubber footwear.

ISSUED MAY 25, 1909.

922,541. Tire tool. J. A. Swinehart, Akron.

922,597. Vehicle wheel. E. S. Kintz, Kenmore, Ohio, assignor of one-half to M. O. Hower, Akron.

922,631. Pneumatic tire. F. Reddaway, Pendleton, Manchester, England.

922,669. Spare tire cover. H. Cohen, Brooklyn, N. Y.

922,739. Tire protector. E. J. Weidner, Lindsay, Neb.

922,773. Golf ball. E. Kempshall, London, England.

923,001. Wheel. G. M. Badger, Quitman, Ga.

923,059. Vehicle tire. A. M. MacFarland, assignor to W. W. Gibbs and others, all of Philadelphia.

923,104. Wheel tire. A. R. Bangs, New York city.

Reissues.

12,062. Elastic webbing. S. Kops, assignor to Kops Bros., all of New York city.

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each postpaid.]

GREAT BRITAIN AND IRELAND.

PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the Application, which in the case of these listed below was in 1908.

**Denotes Patents for American Inventions.*

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, MAY 5, 1909.]

340 (1908). Non-skid pneumatic tire with recessed tread. E. Kempshall, London.

349 (1908). Detachable tire carrying rim. W. Clark, London. (Communicated from Germany.)

487 (1908). A non-skidding reinforced band for vehicle tires, boot soles, and the like. A. H. J. P. Hulot, Paris, France.

530 (1908). Solid rubber tire with transversely notched tread with bridges across the notches. H. R. Carter, London.

544 (1908). Device for securing the edges of pneumatic tires to channel rims. A. van der Stichelen, Gand, Belgium.

*607 (1908). Elastic fabric for suspenders and the like. S. Kops, New York city.

628 (1908). Rim with removable flange for motor tires. W. J. Nordlund, Oakland, California.

670 (1908). Non-skid tire tread. E. Rodriguez, Chiswick, and three others.

676 (1908). Detachable tire carrying rim. G. Moore, Aston, near Birmingham.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, MAY 12, 1909.]

808 (1908). Wheel with wooden tread blocks hinged together and pivoted to plate springs carried by the hub, the working length of each spring limited by a block of wood and one of rubber. A. R. Hubbard and R. Flay, London.

1,044 (1908). Tread of zigzag figure for pneumatic tires. G. T. Turner, London.

1,141 (1908). Self-sealing tire air tube comprising two separately concentric tubes with an intermediate layer of rubber combined with sulphur and naphtha or with Pontianak or rubber solution. C. Jones and H. C. Newman, London.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, MAY 19, 1909.]

1,254 (1908). Dissolving india-rubber. [Symmetrical dichlorethylene, CHCl:HCCl, described in specification No. 19,568 (1904), as a general solvent, is used as a solvent for caoutchouc, and produces a homogeneous solution free from clots.] E. Fischer, Schonberg, near Berlin, Germany.

1,268 (1908). Pneumatic tire with outer cover formed of pliable woven fabric constructed from metal cables formed by twisting together strands of wire. P. I. Viel, Paris, France.

1,480 (1908). Spring wheel with elastic tire. C. J. Montgomery, Rock Ferry, Cheshire.

1,510 (1908). Device for preventing side slip in motor cars. A. A. Mansell and G. Smith, London.

1,543 (1908). Puncture preventing band of asbestos and cloth for pneumatic tires. L. Azulay, Eastbourne.

1,590 (1908). Elastic tire. A. T. Collier, St. Albans, and H. S. Foster, London.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, MAY 26, 1909.]

1,634 (1908). Detachable tire carrying rim. W. H. Brough, London.

1,738 (1908). Rim for solid rubber tires supported upon helical springs. A. Ottanelli, Settignano, Italy.

1,750 (1908). Solid rubber tire with grooved tread. C. S. Stone, London.

2,030 (1908). Lining for pneumatic tire covers. R. Turner, London.

2,039 (1908). Elastic tire supported by helical springs. J. Thomson, Invercargill, New Zealand.

THE FRENCH REPUBLIC.

PATENTS ISSUED (with Dates of Application).

397,470 (Dec. 5, 1908). L. L. Nozal. Machine for mounting rubber tires on wheels and fastening same with cables and attaching rims.

397,472 (Dec. 7). J. Nash and A. H. Roper. Sectional pneumatic tire.

397,491 (Dec. 15). J. Boelen. Air tube for tires.

397,521 (Feb. 26). J. de Pontoux. Pneumatic tire.

397,636 (Feb. 29). A. S. Jonas and G. L. Getting. A type of tires and block tread for road vehicle wheels.

397,552 (Dec. 17). R. B. Price. A process for the preparation of rubber, so as to preserve the same and make it fit for transportation.

397,561 (Feb. 27). C. Coquerelle. A process and composition for soldering, glueing and hardening rubber, leather and similar materials.

397,614 (Dec. 18). L. Lanthernier. A process for increasing the wearing qualities of artificial rubber and rubber substitutes, artificial leather and leather substitutes whenever the same are used for making pneumatic tire treads, shoe soles and the like.

397,879 (Dec. 24). Bauve and Nauiot. Protection for pneumatic tires and balloons.

397,748 (Mar. 5). G. Plasse. Elastic tire.

397,749 (Mar. 5). Lesage. Tire protector.

397,811 (Dec. 23). Mlle. Kauffmann and Mlle. Devinoy. Waterproof protector for hats and bonnets.

397,987 (Dec. 29). E. A. Garvey and C. A. Garvey.

397,988 (Dec. 29) Fox Metallic Tire Belt Co. Tire protector.

398,001 (Dec. 29). P. Dupont. Removable tire rim.

398,039 (Dec. 31). Mac Giehan. Pneumatic tire.

The Late James Bennett Forsyth.

AN exceedingly wide circle in the rubber trade received with a sense of personal bereavement the news of the death of James Bennett Forsyth, who, for a longer period than is usual in a career of business activity, had been identified with one of the oldest companies in the rubber industry in America. Though Mr. Forsyth had been an invalid for some time, until within a month or so his associates in the business had looked forward to his return to the office in which he was so long the leading spirit. But in time his physician became less and less hopeful, and on the evening of June 13 he passed away peacefully and without pain.

Mr. Forsyth was born in Brookline, Massachusetts, February 2, 1850, and six years later his family removed to Roxbury (now in Boston), where his father, William Forsyth, had charge of a department in the factory of the Boston Belting Co. The son's health at an early age was such as to prevent his regular attendance at school, and the family physician advised that he be put at some light employment as a probable means of improving his health. Early in his fourteenth year, therefore, he was placed in the office of Mr. Merrill, clerk of the company at the factory, to assist him generally in the office, and to go to the post-office and the bank. At that time John G. Tappan was treasurer of the company, and Charles McBurney, the manufacturing agent, the company's store in Boston being conducted under the style of Tappan, McBurney & Co., selling agents. The superintendent was Robert Hale. It was a part of the duties of the young assistant clerk to go frequently through the mill, particularly in regard to goods to be shipped to the store, and after a time he asked permission of the superintendent to work in the mill when he could be spared from the office. Mr. Hale consented, and he worked for several hours each week, first in one department and then another as he chose, for a year or more.

THE LATE JAMES BENNETT FORSYTH.

On February 1, 1864, Mr. Merrill, having been forced by illness to retire, his assistant was promoted to the office of clerk. Fourteen months later, he was made assistant superintendent under Charles McBurney, who had succeeded Mr. Hale, and on April 1, 1866, Mr. Forsyth became superintendent. Four years later he took the position also of manufacturing agent. These two positions he held until the spring of 1884, when he relinquished the work of superintendent, and in addition to manufacturing agent, was made general manager of the company, and these two positions he held for several years. The presidency of the company, at the date first mentioned, was held by Henry F. Durant, who was succeeded by Elisha S. Converse. For a while the office was filled by Mr. Eaton, after whose death Mr. Forsyth was elected president, which office, in connection with that of general manager, he occupied until the end of his life.

If any single rubber factory should be selected, to illustrate in its history the development of the india-rubber industry in the broadest sense, there could scarcely be an objection anywhere to giving the preference to the Boston Belting Co. The seal of that company bears the date 1845, but the business dates back, in unbroken succession, to the first important attempts to make rubber goods in the United States, and their premises embrace the original building—one which possesses additional historic interest as having been the scene of part of Charles Goodyear's early work. The company started on a career of success from its first adoption of the process of vulcanization, and perhaps in no other rubber factory have a greater number of practical processes and appliances been developed.

Mr. Forsyth contributed greatly and in very many ways to the success and prosperity of the company, both through his inventions and his administrative ability. His patented inventions cover many useful machines employed in the industry, and many important articles of manufacture. Several years ago it was stated that he had taken out more than 50 patents. A complete list of these is not now available, but a reference to the patent office records subsequent to the date alluded to shows that many additional patents have been granted to him. They cover machinery for the making of rubber hose, for making and stretching rubber lined cotton and linen hose; rubber covered rollers for use in cotton, woolen and paper mills, print and dye works, bleacheries and so on.

The family of Mr. Forsyth is of French extraction, existing for many generations under the name Forsath or Forsaith, which became Forsyth on the removal of a branch of the family to Scotland. Captain Alexander Forsyth, born in Ayrshire in 1689, removed to Boston, where he was married in 1715, and where for many years he was selectman and otherwise a prominent citizen. His son John also rose to many positions of public trust in Boston. Both eventually returned to Scotland, and died there. A son of the latter, born in Scotland, was Captain John Forsyth, of the British army, whose son William (born in Ayrshire 1807—died in Boston, 1876) was the father of the subject of this sketch. He married, Jane, daughter of Hamilton Bennett, Esq., of Buxton, England. They were survived by four sons, of whom James Bennett was the second, all becoming connected with the Boston Belting Co. There now remain two brothers—John Hamilton and Thomas Alexander—and they are still with the company.

Mr. Forsyth served as a director in the National Rockland Bank of Roxbury from 1882 to 1894. He was one of the incorporators of the Rubber Manufacturers' Mutual Insurance Co., was elected to its first board of directors, and continued in that capacity until January 28, 1903, when he resigned. From 1888 until his death he was one of the trustees of Forest Hills Cemetery, in which he always took great interest and pride. He was a member and honorary vice-president of the New England Rubber Club and a life member of Joseph Warren Lodge, A. F. and A. M. Mr. Forsyth was unmarried and had resided at the Hotel Touraine since that hostelry was first opened. It was here that his death occurred.

Funeral services were held on June 15 in St. James's church, Roxbury. The officiating clergyman was the Rev. Murray W.

Dewart, assisted by the Rev. Daniel Dulaney Addison, of All Saints' church, Brookline. The Albion Male Quartette sang "Rock of Ages" and "Nearer My God to Thee," in addition to the music rendered by the church choir and organist. The Rev. Mr. Addison read Tennyson's poem, "Crossing the Bar."

Mr. Forsyth was one of the most interesting figures that the rubber trade has known. His strong acquiline features, black eyes and wealth of wavy black hair, in which there was hardly a thread of silver, made him a notable figure anywhere. The company which he built up was his idol, and he sacrificed himself to it. After a long day at the factory and office, he often worked far into the night. No amount of persuasion could prevail upon him to take a vacation. He had a vague plan for the purchase of a farm on which he would one day enjoy life, but was never quite ready for it.

One of his most lovable characteristics was his friendliness. Scores and hundreds sought his advice and found him always interested, always the comforter and helper. His industry and pertinacity were wonderful. Once embarked upon a policy he followed it to the end, at no matter what cost in money or effort.

With the many basic lines in rubber manufacture that have today grown into separate industries, he was not only familiar, but he had in many cases developed them experimentally years before the world was ready for them.

TRIBUTE OF THE NEW ENGLAND RUBBER CLUB.

IT is with profound sorrow that we, the committee representing the New England Rubber Club, learn of the death of our fellow member and Honorary Vice President, James Bennett Forsyth. Seldom is it given to a man in any industry to be at once a pioneer, founder, and successful administrator. In intimate connection with the rubber trade for half a century, the originator of many of its most valuable processes, the builder of a great and successful business, he was a merchant-manufacturer of the highest type. Capable, conscientious, courteous, of infinite industry, a wise and careful counsellor, ever loyal to friend, to his business associates, and to the industry that he helped to create, his loss will long be felt. It is therefore

Resolved, That in his death our association and the trade at large suffer an irreparable loss.

Resolved, That we extend to his family our appreciation of his noble character, and of our sympathy for them in their great bereavement.

GEORGE P. WHITMORE,
E. E. WADBROOK,
A. M. PAUL,
Committee on Resolutions.

Boston, June 21, 1909.

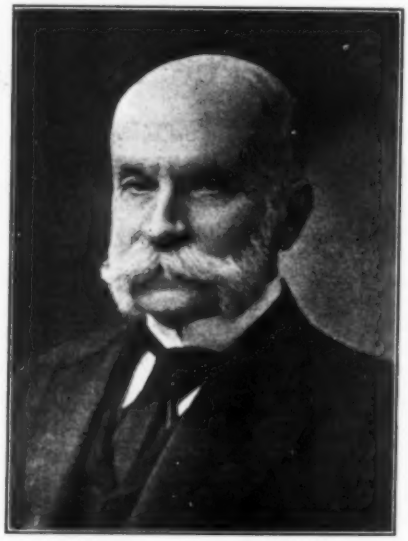
HOLLAND BENNETT.

HOLLAND BENNETT, a well-known young Boston lawyer, who died at sea on the steamship *Berlin*, which arrived at Genoa from New York on June 11, was the son of Josiah Q. Bennett, who is connected with a number of important corporations, including the Boston Woven Hose and Rubber Co., of which he is a director and secretary. The deceased was a member of the legal firm, Furbish & Bennett. Mr. Bennett was married on May 12 and his bride was on the steamer with him.

GUSTAV AMSINCK.

THE passing of Gustav Amsinck removes perhaps the last survivor of the rubber importing régime in the United States of a half century ago. Born in Hamburg in 1837 and educated in Germany, he came to America at the age of 20. Three years later he joined the banking and commission house of L. E. Amsinck & Co. (New York), founded by his brother, as a partner.

The firm by this time had become interested in the importation of crude rubber from Pará sufficiently to be mentioned along with the older houses of H. K. Corning and James Bishop & Co., both of whom had extensive dealings in rubber. In 1874 the firm became G. Amsinck & Co., with the subject of this sketch at its head—which position he held to the end of his life. The Amsinck firm have continued to import rubber to an important extent to the present, keeping in touch with the changed conditions which time has brought about, while developing on an extensive scale other departments of trade with Central and South America.



THE LATE GUSTAV AMSINCK.

Socially Mr. Amsinck became prominent in the older German set in New York, and belonged to the more important German societies; he was also from an early date a member of the Union Club, joining later the Down Town Association and Baltosrol Golf Club, the Vaudeville Club, and so on. He was a member of the Coffee and Produce exchanges, and a director in various banks and insurance companies.

In October, 1904, Mr. Amsinck and Mrs. James Hude Beekman, a member of one of the oldest families in the city of New York, were married at Geneva, Switzerland. They established a home at No. 25 East Forty-seventh street, New York, where a delightful hospitality was dispensed, and here Mr. Amsinck died on the evening of June 8. Funeral services were held at St. Thomas's Church (Episcopal), on June 11.

MRS. J. OLIVER STOKES.

THE host of friends in the trade of Mr. J. Oliver Stokes, of the Home, the Stokes and the Thermoid rubber companies, will hear with very deep regret of the death of Mrs. Stokes, which occurred in New York on June 7. Mrs. Stokes was Miss Sara Phillips. The funeral services in the State Street Methodist Episcopal church, at Trenton, were conducted by the pastor, Rev. John D. Fox, D. D., assisted by the Rev. John Y. Dobbins, who, as the former pastor of the church, married Mr. and Mrs. Stokes in 1883. The interment was in the Stokes family plot in Greenwood cemetery, Trenton.

THE recent disaster at sea by which the steamer *Republic* narrowly escaped loss with her passengers, their preservation being credited to the successful call for aid through the medium of wireless telegraph, leads an English contemporary to remark that whatever its success in its proper field, wireless has not been proved to be adapted to carrying on a busy inland traffic. It is *Telephony* that comments thus after quoting from the record of the wireless operator on the *Republic*, most of whose work during several hours seems to have been in urging some of the other boats with wireless outfits to "keep quiet." He referred to one boat which, "using stronger current, drowned everybody," so that the *Republic* was at times cut off from communication with those it was most important to reach. Our contemporary is of the opinion that with hundreds, instead of a few, wireless messages being transmitted at once in the same atmospheric area, there would be simply hopeless confusion.

NEW FEATURES IN TIRES.

GOODRICH "WIRELESS" TIRE.

THE new Goodrich "Wireless" solid tire consists of three integral factors: A special steel base with dovetailed grooves on the top surface; a hard rubber sub-base, which is inseparably united with the steel base, and a soft rubber tread or tire proper, inseparably vulcanized upon the hard rubber sub-base. The tire is mounted on a special steel rim, or felloe band, which projects far enough on either side to protect the rubber from jamming against curbs and the like in service. It is held in place on this band by means of lug bolts on either side of the steel base, and a key on the felloe band which fits into a keyseat on the inside of the steel base of the tire, thus preventing circumferential movement. The fastening point of the Goodrich "Wireless" tire is steel to steel, and is, therefore, absolutely secure. The improved constructed makes it possible to set the twin tires on the rim in direct contact with each other. This reduces the space between the tires to the minimum necessary to prevent skidding and displacement of the rubber under stress. [The B. F. Goodrich Co., Akron, Ohio.]

NEW "AJAX" NON-SKID TIRE.

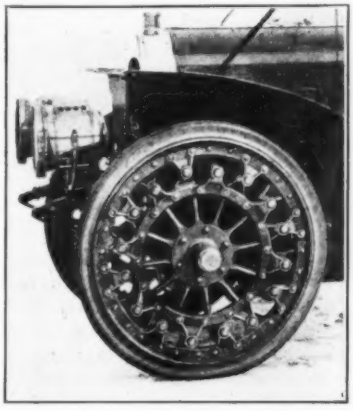
THE tread of this tire is not molded, but is wrapped on the shoe by the same process by which the ordinary smooth Ajax tire is made. The new Ajax tread differs in appearance from the average non-slipping styles; its raised parts being quadrilaterals

NEW "AJAX" NON-SKID TIRE.

3-16 inch in depth, arranged diagonally across the tread. These are placed for enough apart to prevent squeezing and flattening into a smooth surface when under weight and in contact with the road surface, which would cause slipping on wet pavements or mud, which non-skids are intended to prevent. The tire itself is heavier than the smooth model, the 3½-inch size having five plies of fabric. [Ajax-Grieb Rubber Co., New York.]

SEATON SPRING WHEEL.

THE American Spring Wheel Co. (No. 227 Williamson building, Cleveland, Ohio) have been organized to manufacture the Seaton spring wheel, and the same interests have incorporated the International Spring Wheel Co., to handle the European patents



THE SEATON SPRING WHEEL.

on this invention. An important interest in the new companies is held by Mr. William E. Metzger, some time general sales agent for the Cadillac Motor Car Co., after which he formed the Everitt-Metzger-Flanders Co., automobile manufacturers. He has sold his holdings in this to become connected with the Seaton spring wheel manufacture. Mr. Metzger refers to the Seaton as the first spring wheel to successfully make possible the use of solid tires on all types of vehicles, both commercial and pleasure.

"LITTLE WONDER" VULCANIZER.
[Rice & Dayton Manufacturing Co., Cedar Falls, Iowa.]

THE GOODRICH "WIRELESS" TIRE.
[The B. F. Goodrich Co., Akron, Ohio.]

KEMPSHALL NON-SKID TIRE.
[Cryder & Co., New York.]

THE RUBBER TRADE AT AKRON.

BY A RESIDENT CORRESPONDENT.

MR. ARTHUR H. MARKS, vice-president of The Diamond Rubber Co., authorizes your correspondent to make the announcement that his company are about to engage in the manufacture of rubber footwear on a large scale. The new department will be located in a new factory building now under construction, on property adjoining the main plant. It is five stories high and affords about four acres of floor space. Not all of this will be used at first for the footwear department. Mr. Marks said he was unprepared to make any statement as to the extent of manufacture of the new product, except that it will be on the same large scale and with the same thoroughness that has characterized the other departures of the company. He was also unprepared to say anything as to the personnel of either the factory or sales management of the new department. A full line of rubber boots and shoes will be manufactured. The Diamond Rubber Co. are rapidly widening their scope. They have just completed the establishment of an extensive insulated wire and cable department.

* * *

OFFICIALS of The B. F. Goodrich Co. deny any knowledge of plans of the company to establish a branch factory in Paris, France. The story was sent out from Paris early in June by a correspondent to the effect that Mr. B. G. Work, president of the Goodrich company, who is traveling in Europe, was in Paris making plans for the establishment of an automobile tire factory near that city, to be operated by American experts from the company's factory in Akron. If this is true the Goodrich company will be the first American tire-making concern to start a factory in Europe. They have already established a selling office and a repair shop in Paris. French sizes are kept in stock for French machines, as well as American sizes for American tourists. Both Mr. Frank H. Mason, vice-president, and Mr. C. B. Raymond, secretary of the company, say they know nothing of the departure.

* * *

THE Goodyear Tire and Rubber Co. will make a hard fight for a reversal of the verdict against them awarded to Barney Oldfield, the noted motor racer, in the Detroit (Michigan) court on June 19, by which the full amount of Oldfield's claim for services, $6,709.16, was allowed. The company made a contract with Oldfield, August 15, 1905, by which he was to represent them, partly for advertising purposes and partly as salesman. A common agreement between companies in the Clincher Tire Association, at that time in existence, interfered with the contract with Oldfield, and made the Goodyear company liable to a heavy fine. Accordingly it was cancelled nine days later. Oldfield's claim was that there was a secret understanding that his salary was to continue and in the verdict he was allowed $50 a week with interest from August, 1905, until January 1, 1909. The company's claim, on the other hand, is that the contract was cancelled in good faith and that there was no understanding or side agreement of any kind.

* * *

THOUGH officials of the company have announced no definite plans, it is expected that the Marsh rim factory of The Diamond Rubber Co., at present located in Columbus, will be moved to Akron during the present year. It was the intention of the Diamond company, when the Marsh plant was purchased, to remove it at once to Akron, but the demand for a constant output forbade a cessation of operations long enough to make the change. The Diamond company are at work on two new factory buildings, and it is expected that the rim factory will be placed in one of these.

* * *

DIRECTORS of the Aladdin Rubber Co., of Akron, are contemplating a consolidation with another rubber company, and the formation of an entirely new corporation, with a new name. Mr. James Christy, president of the Aladdin company, said late in June that the plans were still so uncertain that no definite announcement could yet be made. He said, however, that the location of the plant, which is now in Barberton, Ohio, will not be changed. New buildings will be erected, and the manufacture of mechanical rubber goods will be added to the present reclaiming business of the Aladdin company. Mr. W. W. Wildman, who was until recently assistant manager of the Federal Rubber Co. (Milwaukee), has been selected as general manager of the company. He is now in Akron attending to matters pertaining to the reorganization.

* * *

THE demand for extra sized tires for smaller rims to fit the case of "the fool that overloads his car" has increased so that the Firestone Tire and Rubber Co. are manufacturing several sizes in that type. A new list of these has recently been issued. The annual outing of the employés of the Firestone Tire and Rubber Co. was held at Myer's Lake, between Akron and Canton, on June 26. More than 1,000 attended. A large addition to the Firestone factory which was hinted at some months ago is now positively announced by officials of the company. So far, however, they have no details ready for publication.

* * *

THE B. F. Goodrich Co. announce two victories for the new "Haskell White Streak" golf ball. It was used by the winners in both the Southern championship meet at Memphis, Tennessee, and in the Northern and Southern amateur championship meet at Pinehurst, North Carolina.

* * *

LOCAL companies, especially the Firestone and the Diamond, took a keen interest in the Crown Point (Indiana) automobile races. H. S. and R. J. Firestone, together with their advertising manager, J. F. Singleton, attended in person, and J. A. Braden was the chief representative of the Diamond company.

THE RUBBER TRADE IN SAN FRANCISCO.

BY A RESIDENT CORRESPONDENT.

THE gradual improvement which has been noticed in commercial conditions in and about San Francisco since the first of the year has continued during the past month, and collections are slowly but surely getting better. But the rubber houses, among others, say that trade could be from 25 to 50 per cent. better without overtaxing their capacity. With the season done as far as the rubber shoes and clothing and belting for the mills is concerned, there is not a great deal to anticipate until fall. There is a steady demand for druggists' sundries, but the consumption is below the normal and collections are not lively from the druggists. The automobile tire business is the only line that is really active, and the enormous increase in the automobile trade in California during the summer has caused an unusually big business on tires, so that there is no complaint from the tire houses.

Most of the local rubber establishments in San Francisco have exhibits at the big Mechanics' fair and sixth annual convention of the National Association of Stationary Engineers, which is being held out at the Auditorium Pavilion. Very attractive special displays have been made by the Pacific Coast Rubber Co., Bowers Rubber Works, the Sterling Rubber Co., the Eccles & Smith Co., the Plant Rubber and Supply Co., and the Gorham Rubber Co. Edward Garrett, formerly connected with the Gorham Rubber Co., has also on exhibition a good show of his Callahan boiler compound. All of the rubber houses have spent considerable money in making their displays attractive and the rubber exhibits are proving to be one of the most interesting lines at the show. Large crowds have been in attendance and the show has proved a marked success.

Mr. Edward R. Rice, sales manager and also a director of the United States Rubber Co., is now visiting in San Francisco. He

is accompanied by his daughter, Miss Helen Rice, and also by Mr. and Mrs. C. Kenyon, of Kenyon & Co. (Brooklyn), manufacturers of raincoats. Mr. Rice speaks enthusiastically of San Francisco, which he considers to have a wonderful future for the rubber business.

The rubber houses of San Francisco got together and gave a big picnic last week to the automobile people, and at San Mateo, where the picnic was held, those who participated report that they enjoyed one of the best times of the season.

Mr. L. L. Torrey, coast manager for the Pennsylvania Rubber Co., has gone East on a business trip. Mr. Long, a salesman for many years connected with the Bowers Rubber Works, has accepted a position under Mr. Torrey.

The contract for supplying the fire hose for San Francisco has been divided between the Bowers Rubber Works and the American Rubber Manufacturing Co., the two local manufacturers which bid for it.

Bids have been opened for the supplies to the state prisons at Folsom and San Quentin, and the Gorham Rubber Co. expect to handle this business as usual. Mr. Gorham is now in the southern part of the state trying to gain membership to the Tuna Club. Any one who can catch a tuna, the gamest fish in existence, is entitled to membership, and the membership is very small. Mr. Gorham has his fine new steam launch down there, and expected to have his new tender by this time, but owing to an accident last Monday the tender was lost.

Mr. Grant, with Eccles & Smith Co., just finished a good order for laying interlocking tiling at the new St. Mary's cathedral. He also just closed a large order with the new Balfour Guthrie flour mill at Portland, Oregon, for 5,300 feet of 24-inch belt and 1,000 feet of 18-inch belt.

Mr. Oliver, manager and stockholder in the American Rubber Manufacturing Co., was in San Francisco this week and reported that business was very good.

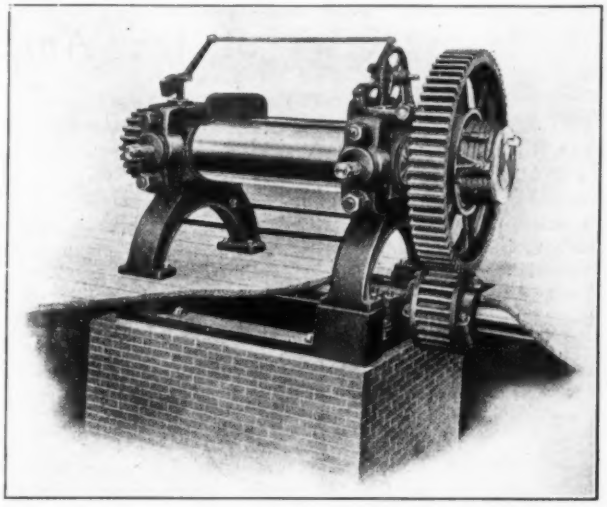
E. J. Fleming, packing representative of the Bowers Rubber Works, is now in New York, in the interests of this firm's "Skookum" packing. Mr. Chase reports that everything at the factory and salesrooms is running smoothly. At the factory the firm have been installing some new calender equipment.

R. H. Pease, Jr., treasurer of the Goodyear Rubber Co., reports that business is showing up very well with his firm, and that collections have picked up in a very satisfactory manner.

J. E. Argus, manager of the mechanical department of The Diamond Rubber Co., came back from the head offices at Akron on June 22. Mr. C. E. Mathewson, Pacific coast manager of this firm, has stirred up some excitement among the rubber tire houses of this city by issuing a general challenge for a rim-fitting contest. It is proposed to allow some disinterested club to arrange the rules for a contest.

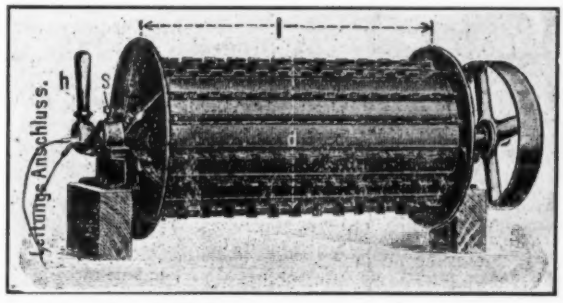
The Pacific Coast Rubber Co. are installing some new sample rooms for the display of rubber footwear and clothing. The principal room adjoins a big show window, so that the entire display can be seen from without as well as from within. Mr. Winslow, the manager, states that the usual order of business is now on with little activity, although he believes that beginning with July there will be considerable doing in the rubber line. The fact that so many new plants are putting in direct connections with electricity is interfering considerably with the activity of the belting business, he said.

THE United States consul at Montevideo reports on the source of the rubber shipped from that port, which he finds comes from Bolivia, some of it being transported more than 600 miles in ox carts, then perhaps 2,000 miles in steamers to Montevideo, whence it goes to Europe. He mentions, but does not name, an American firm which once undertook to collect rubber in Bolivia with Montevideo as a base, and found it a very hazardous business.



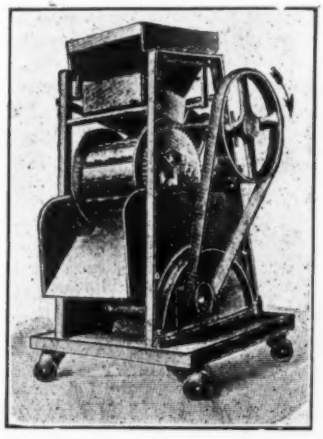
FRICTION CLUTCH DRIVEN RUBBER GRINDER.

[Farrel Foundry and Machine Co., Ansonia, Connecticut.]



"GEIST" ELECTRO MAGNETIC SEPARATOR.

[For removing metal from waste rubber, in reclaiming work. The cut shows the drum, provided with a magnet inside, through which the material is passed.—Plutte, Scheele & Co., London.]



"GEIST" ELECTRO MAGNETIC SEPARATOR.

[A view of the machine driven by a motor; the drum is shown on a smaller scale.]

Two Goodyear endless motor truck tires used on one of the heavy 'buses in Fifth avenue, New York, are reported to have stood up respectively under 21,664 miles and 18,924 miles of usage. These 'buses are heavy vehicles adapted to carrying up to 30 passengers.

News of the American Rubber Trade.

UNITED STATES RUBBER CO.'S BONDS LISTED.

CIRCULAR A-3655 of the committee on stock list of the New York Stock Exchange relates to the listing, on May 27 last, of the $15,000,000 ten year 6 per cent. collateral trust sinking fund bonds, due 1918, of the United States Rubber Co. The authorization of such bonds to the extent of $20,000,000, by the shareholders of the company, at a special meeting, was reported in THE INDIA RUBBER WORLD, January 1, 1909 (page 152). There have been issued $15,000,000 to date, the details of which are set forth fully in the Stock Exchange circular, including a list of the collateral upon which the issue is based, and the plans for a sinking fund for their retirement. The trustee is the Central Trust Co. of New York.

A NEW WHITING COMPANY.

WYANDOTTE Whiting Co. is the name of a company who have begun recently the manufacture of a commercial floated whiting at Wyandotte, Michigan. They are selling it to various industries, and particularly to rubber goods manufacturers. It is mentioned as being of a very high grade.

AFFAIRS OF EUGENE ARNSTEIN.

THE creditors of Eugene Arnstein, in bankruptcy, in the United States district court at Chicago [see THE INDIA RUBBER WORLD, April 1, 1909—page 261], have confirmed a composition of 40 per cent. in cash on the amount of their claims, said amount having been provided by members of the family of Mrs. Arnstein.

GOING INTO FOREIGN TRADE.

THE B. & R. Rubber Co. (North Brookfield, Massachusetts) have sent Charles B. Griffith, their sales manager, to cultivate trade in Great Britain and on the Continent. The company have made arrangements to ship some of their products to Japan. They were mentioned recently as having contracted to supply one domestic customer with 500 tons of fruit jar rings.

CHANGE OF STYLE.

THE Pittsburgh Rubber Supply Co., organized at the beginning of 1906 by William P. Cowell, who had been a salesman for important mechanical rubber goods houses, will be known hereafter as the Cowell Rubber Co., described in its announcements as "a purely local institution, with mills at Hamilton Square, N. J." The address of the company is corner Eighth and Liberty streets, Pittsburgh, Pennsylvania.

NEW RUBBER SHOE FACTORY AT BRISTOL.

THE Consumers' Rubber Co. (Bristol, Rhode Island), of which Terence McCarty is the head, are now well started in their new line of production, rubber footwear, while continuing busy with insulated wire. They were reported recently to be making 1,000 pairs of shoes daily, and preparations were being made to increase the capacity to 7,000 pairs. The plant occupied by the insulated wire department of the company is that of the old Byfield Rubber Co., while the shoe department is in an adjoining building erected by Mr. McCarty. Additional land has been purchased in close proximity to these buildings with a view to further extensions.

NEW LINE OF INSULATING MACHINERY.

THE Watson Machine Co. (Paterson, New Jersey) announce that in addition to their cordage machinery, which they have manufactured for more than 20 years, they are taking on a complete line of wire stranding, cabling, armoring, insulating and wire rope making machines. They have effected a combination with Mr. Thomas A. Aiton, who has made a specialty of this class of machinery for the past 12 years, in both America and Europe. Mr. Aiton has entered the firm as general manager, and is giving his special attention to this business.

RUBBER INDUSTRY IN CALIFORNIA.

THE American Rubber Manufacturing Co. (Emeryville, California) are making a full line of mechanical goods—hose, belting, packing and molded work. They specialize in oil belting, having succeeded in producing a superior oil resisting stock. They have taken on the manufacture of rubber-lined cotton fire hose, their first contract for which, of any magnitude, was with the city of San Francisco. Lately they have installed flat and circular looms. The company have done considerable business with the United States government. The officers of the company are: *Archibald Borland,* of Oakland, president of the Summit Construction Co., president; *Allen Knight,* expert accountant, vice-president; *W. Edwin Griffith,* formerly of the California Street Cable Railway Co., secretary and manager; *Henry C. Norton,* formerly of the Pacific Coast Rubber Co., treasurer; *H. A. MacKusick,* formerly of The Diamond Rubber Co., assistant manager; *M. F. Oliver,* formerly with the Bowers Rubber Co., superintendent. The four first named, with George Fredericks, capitalist, constitute the board of directors.

A RUBBER STORE IN SALT LAKE CITY.

THE Hendrie & Stephens Rubber Co., recently incorporated to succeed the mechanical goods and tire dealing firm of Hendrie & Stephens, of Denver, Colorado, have established a branch in Salt Lake City. They carry in Denver and Salt Lake two of the largest stocks in the lines mentioned west of Chicago. They handle exclusively in their territory the lines made by the Republic Rubber Co. (Youngstown, Ohio), specializing on heavy elevator belting and conveyor belts for mining purposes. They also do a large business in packings made by Bowers Rubber Works (San Francisco.) At the beginning of June the company advised THE INDIA RUBBER WORLD: "The month just passed was the largest month we have ever had in our business career. Conditions at the present time in the West are very encouraging." W. C. Hendrie is president of the new corporation, and C. E. Stephens secretary and treasurer.

THE BUSINESS OF G. AMSINCK & CO.

THE firm style of G. Amsinck & Co., export and import commission merchants and bankers, of New York, will not be changed by the death of Mr. Amsinck, reported on another page. The business will be continued under the direction of the surviving partners, Adolf Pavenstedt and Justus Ruperti.

The will of Mr. Amsinck, filed for probate on June 19, disposed of an estate valued at several millions of dollars, though the value is not stated in the will. His widow inherits valuable real and personal property, $1,000,000 in cash, and the income from a $1,000,000 trust fund established by the will.

RUBBER SHOE TRADE IN CANADA.

THE month has been a very favorable one for the rubber trade [says *The Canadian Shoe and Leather Journal* for June 1]. The weather clerk has mixed things up pretty well, and the rainy season is always a harvest time for rubber dealers. Although the sales for many were perhaps a little above the average, yet the business was by no means large. The manufacturers report orders well up to the mark at the closing date and anticipate a very fair season. The exceedingly strong raw rubber market is causing the trade no little uneasiness, as some will no doubt have to pay much in excess for their raw material than they figured on when quoting prices.

EDWARD R. RICE.

[Connected with the rubber footwear trade since 1872; became connected with the Woonsocket Rubber Co. in 1887; in charge of selling department of the Joseph Banigan Rubber Co., incorporated 1896; since 1901 connected with the United States Rubber Co., of which he is now manager of sales; elected a director of the company at the last annual meeting.]

PLYMOUTH RUBBER CO. TO MOVE.

THE Plymouth Rubber Co. (Stoughton, Massachusetts) were reported recently to be purchasers of a large amount of real estate in the neighboring town of Canton, Mass. THE INDIA RUBBER WORLD is informed that the company purpose removing their plant to Canton. The present plant, developed from very small beginnings, has grown until larger premises are a necessity. The Plymouth company are proofing material for the automobile trade on a large scale, in addition to proofing an extensive line of sheeting and drill for the general wholesale and jobbing trade. Their mold department has also increased extensively, including the manufacture of their widely known "Nerv-Eze" rubber heel. They do a large amount of work in covering rolls, and in making various molded specialties. They have purchased something like 60 acres of land, with water privilege of about 300 HP. The new location is convenient for transportation for Boston and New York, and some new buildings will be erected on it, with a view to increasing their output very extensively. The officers of the company are: A. Sydeman, president and treasurer; W. H. Sydeman (his son) secretary, and J. A. Meade, vice-president and superintendent.

FEDERAL RUBBER CO. (MILWAUKEE, WISCONSIN).

MR. OTIS R. COOK, who has for some years been widely known in the automobile tire trade, was appointed general manager of this company at a meeting of the board of directors on June 8. The management of the interests of the company in New York city and Long Island has been placed in the hands of Mr. D. B. Nally, late of the Continental Rubber Works, who is now located at No. 35 Warren street, New York.

INDUSTRIAL EXPOSITION AT CLEVELAND.

THE Cleveland Industrial Exposition, held under the auspices of the Cleveland Chamber of Commerce, June 7-19, was in many respects a notable enterprise, reflecting great credit upon Cleveland as a city, and the results were most satisfactory to all who were concerned. A large temporary building was erected, in addition to which the Central Armory was occupied. Cleveland has now become the leading industrial city of Ohio, and its numerous industrial concerns lent enthusiastic support to the exposition. The Mechanical Rubber Co. made an exhibit of their products, which was interesting, both on account of the extent and variety of what it had to offer to the public, and on account of the ornamental and decorative character of the display.

THE NEW FACTORIES AT GRANBY.

A CHARTER has been granted by the government of the Dominion for the Miner Rubber Co., with $1,000,000 capital, organized by Mr. S. H. C. Miner, whose plans for manufacturing rubber footwear at Granby and Montreal have been reported already in THE INDIA RUBBER WORLD. Mr. Miner will be president of the new company. A charter has also been granted in the name of the Walpole Rubber Co., incorporated for $250,000, which will manufacture mechanical goods in connection with Mr. Miner's shoe plant. The buildings for the shoe plant are complete and the machinery is being installed. Ground was broken early in June for the Walpole plant, which will adjoin the shoe plant, and in point of size practically duplicate it. These plants are planned to be in operation during the coming winter.

TRADE NEWS NOTES.

THE unique periodical *How*, published "for manufacturers," is not large, but it is exceedingly full of meat. One of the good things in a late issue is an article on "Valuable Wastes," from the pen of Frederick J. Maywald, F. C. S., a consulting engineer of New York, who is becoming widely known in the rubber trade.

Mr. Leon Ekert, of Ekert Brothers, Hamburg, is visiting the United States. This firm are large jobbers in rubber footwear and are the sole consignees for a good part of Europe for the United States Rubber Co. for certain leading brands of rubber boots and shoes. Ekert Brothers are now opening a special sporting goods department.

The McIlroy Belting and Hose Co. (No. 8 South Canal street, Chicago) favor THE INDIA RUBBER WORLD with a photograph of two rolls of Rubber-ite belting, each 2,000 feet, 24 inch, 8 ply, referred to as two of the largest rolls of belting ever turned out of a Western factory.

American Cushion Skate Co., incorporated May 17, 1909, under the laws of Massachusetts, with $50,000 capital authorized, has for its object the manufacture of ice or roller skates, with cushioning springs between the runner and foot-supporting plates. Wilfred E. Tait, No. 32 Lothrop street, Beverly, Mass., is president, and John J. Heaphy, also of Beverly, treasurer.

WILLIAM E. BARKER.

[Appointed recently merchandise manager of branch stores of the United States Rubber Co., and has since been on a tour of visits to these stores. A native of Lynnfield Center, Massachusetts; resided at Malden since 1873; has had a wide experience in the sale of rubber goods. Was with Aetna Rubber Mills and Para Rubber Shoe Co., and formed Enterprise Rubber Co. (Boston). Divides his time between Boston and New York offices of United States Rubber Co.]

NEW INCORPORATIONS.

THE Hendrie & Stephens Rubber Co., April 24, 1909, under the laws of Colorado; capital $50,000. Incorporators: W. C. Hendrie, C. E. Stephens and G. W. Rogers. Place of business: Denver, Colo.

Auto Tire Security Co., license issued to open books May 19, 1909, under the laws of Illinois; capital $35,000. Incorporators: Morris G. Leonard, Raymond D. Penney, and Edward R. Newman. Place of business: Chicago.

Tyson Brothers & Richardson, Inc., May 24, 1909, under the laws of Connecticut; capital $15,000. Incorporators and directors: Robert E. Tyson (president) and Thomas H. Tyson, Stamford, Conn.; Christopher Richardson (secretary and treasurer), No. 233 West Twenty-third street, New York. To succeed to the business of Tyson Brothers, manufacturers of rubber substitutes, some time at Fairfield, Conn.

Congress Shoe and Rubber Co., June 8, 1909, under the laws of Massachusetts; capital $100,000. Incorporators: Frederic M. Haynes, Chester J. Pike and William A. Calvert. This corporation succeeds to the business of Haynes, Sparrell & Co., No. 301 Congress street, Boston, at the same address. The business is the selling of the "Shawmut" and "Massachusetts" rubbers and specialties in leather footwear, in New England and northern New York. Mr. Haynes, who is president and treasurer of the new corporation, was for thirty years at the head of the firm Haynes, Sparrell & Co. and its predecessors, and Mr. Pike has been connected with the rubber shoe trade for about the same period.

Automatic Inner Tube Co., June 10, 1909, under the laws of Delaware; capital authorized, $350,000. Incorporators: Anson M. Bangs and Anson R. Bangs, New York city, and George S. Stiegler, Wilmington, Del.

Chicago Rubber Refining Co., June 7, 1909, under the laws of Illinois; capital, $5,000. Incorporators: Christian Casselman, E. F. Casselman and Henry Anixter. Place of business, Chicago.

Regal Tire and Rubber Co., June 16, 1909, under the laws of New Jersey; capital authorized, $250,000. Incorporators: William H. Wilson, Frank A. Kurtz and William C. Reinbold, all of No. 304 Market street, Camden, N. J.

Mechanical Tire Co., June 17, 1909, under the laws of New Jersey; capital authorized, $500,000. Incorporators: H. O. Coughlan, S. A. Anderson and C. B. Leggett, all of No. 15 Exchange Place, Jersey City, N. J.

Quadruplex Auto Tube Co., May 28, 1909, under the laws of Delaware; capital authorized, $600,000. Incorporators: Phelon Beale (No. 150 West Forty-seventh street) and Mark D. Nave, New York city; and Gaylord U. Smith, Jersey City, New Jersey. Place of business, Wilmington, Del.

Delaware Steam Packing Co., June 7, 1909, under the laws of Delaware; capital authorized, $100,000. Incorporators: Harry H. Atherton (No. 414 West Eighteenth street), John J. Downey and Luther H. Leber—all of New York city. Place of business, Wilmington, Del.

Lynn Rubber Cement Co., May 5, 1909, under the laws of Massachusetts; capital authorized, $2,000. Incorporators: Isaac S. Leadbetter and Lillian B. Leadbetter, Swampscott, Mass.; William A. Daggett, Boston; and Alberta M. McLellan, South Braintree, Mass.

Samuel Cabot, Inc., Boston, a corporation of Massachusetts, dealing in lampblacks and other materials for the rubber trade, have become registered in Illinois under the laws of that State in regard to foreign corporations.

The Health Co., incorporated recently in Rhode Island [see THE INDIA RUBBER WORLD, June 1, 1909—page 334], are established at Providence, with an office in New York. Charles W. Smith is president. They are marketing the "Health," vaginal syringe, patented in 1907 by J. Wallace, of Providence. They do not yet make the rubber parts, but mean to do so later.

UNITED SHOE MACHINERY CO.

THE annual meeting of the United Shoe Machinery Corporation was held at Paterson, New Jersey, on June 12. The corporation holds the shares of the United Shoe Machinery Co., the net earnings of which for the year ended February 28 were $4,796,971, or more than for the preceding year, in spite of the business depression. The cash dividends were $2,425,926. The number of machines out on lease in the United States on March 1, 1909, was 70,353, an increase for the year of 4,844, or about 7½ per cent.

RUBBERS AT THE BOSTON SHOE FAIR.

PREPARATIONS have been completed for the opening at Boston, on July 1, of the First World's Shoe and Leather Fair, in a building constructed for the purpose, on the Cambridge side of the Charles river. This exhibition is not to be a fair in the sense of a mere display, but in the original sense of a market fair where buyers, and especially buyers, can come from a distance and examine in one place the goods of many sellers. The United States Rubber Co. are entered as exhibitors—not with a view to making a complete display of their various lines, which would call for a great deal of space and involve much duplication—but rather of a few special features from their various factories, including their line of export goods, colored goods, tennis, and so on. They will pay some attention also to their miscellaneous lines, such as clothing and druggists' sundries.

The shoe machinery exhibit by the United Shoe Machinery Co. will consist of a complete outfit of machines that will turn out shoes every day of the exhibit. Leather-making machinery will likewise be in operation.

"GUMMON"—A NEW INSULATING MATERIAL.

THE Dickinson Manufacturing Co. (Springfield, Massachusetts), formerly the Dickinson Hard Rubber Co., are referred to as producing a new insulating compound, under the name "Gummon," which will withstand a heat of 500° F., has great dielectric strength, and is oilproof, waterproof and acidproof. By the way, Charles L. Hotchkiss, formerly treasurer and manager of the Dickinson company, is mentioned as now a resident of the City of Mexico, and connected with the Mexican Electric Vehicle Co. Frederick Harris is now president of the Dickinson Manufacturing Co., Robert C. Cooley treasurer, and Kurt R. Sternberg general manager.

TRADE NEWS NOTES.

THE trustees of Yuba City, California, have awarded a contract for fire hose and a hose cart to the New York Rubber Co.

The long established house of Cutler & Porter Co. (Springfield, Massachusetts) have taken the agency of their territory of the Apsley Rubber Co., of Hudson.

The E. F. Smith Co. (Naugatuck, Connecticut), mentioned recently [see THE INDIA RUBBER WORLD, May 1, 1909—page 299] as having been incorporated to make goods of metal and rubber, advise that they have not yet made any rubber goods.

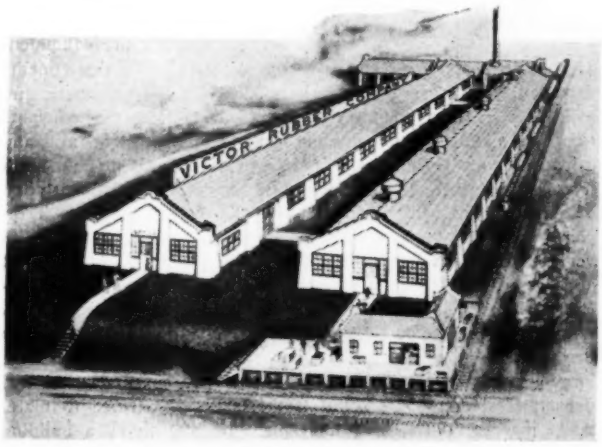
W. D. Allen Manufacturing Co. (Chicago) report a constantly increasing output of the Bowes Pin Hose Rack since the patent controversy regarding the same has been settled. Among recent orders are several large contracts from the Pacific coast from the jobbing houses in San Francisco, and a contract for the fine new La Salle Hotel, now being erected in Chicago.

Seattle Sporting Goods Co. (Seattle, Washington) have absorbed The Rubber Store, at No. 714 First avenue, and the combined business will be carried on at this address. F. S. Clewley is president and manager under the new arrangement, and Dunn Stewart secretary and treasurer.

The Standard Underground Cable Co. are mentioned as having closed contracts for supplying the Pennsylvania Tunnel and Terminal Co., at New York, with 100,000 feet of duplex, rubber insulated and lead-covered cable—aggregating 66.3 miles in length.

THE VICTOR RUBBER CO.—NEW FACTORY.

THE new plant of the Victor Rubber Co. (Springfield, Ohio), succeeding that which was burned last year, is now practically complete. Part of it has been in operation since February. The new plant is of concrete, one story high, laid out in such a manner that additions can be laid out without departing from the general plan. As the building stands, the capacity is about double the old plant. The equipment of machinery is of the most modern type. The multiple presses are operated by a system of low and high pressure hydraulic accumulators, which are fed automatically, the operators controlling the presses by a system of valves. The power plant includes a 400 HP. Hamilton-Corliss tandem compound condensing engine, and boilers of the Heine water tube type. The factory is convenient to three railway lines, and is only ten minutes from the center of the city.



NEW PLANT OF VICTOR RUBBER CO. (SPRINGFIELD, OHIO.)

DIVIDENDS DECLARED.

THE board of directors of Rubber Goods Manufacturing Co. on June 2 declared the forty-first regular quarterly dividend of 1¾ per cent. on their preferred stock, from earnings, payable June 15.

The directors of the Boston Woven Hose and Rubber Co. declared a regular quarterly dividend of $2 per share on the common stock, payable June 15, 1909. The dividends on the common stock are to be paid quarterly instead of semi-annually hereafter.

The directors of Canadian General Electric Co., Limited, declared the quarterly dividend of 1¾ per cent., payable July 1.

Boston Belting Co. will pay the regular quarterly dividend (No. 159) of $2 per share on July 1 to stockholders of record June 15.

The Canadian Consolidated Rubber Co., Limited, have declared an initial quarterly dividend of 1 per cent. on the common stock, also the regular quarterly dividend of 1¾ per cent. on the preferred stock, payable July 2 to holders of record June 28.

CANADIAN MINERAL RUBBER CO.

THERE was issued recently in London £170,000 [=$827,305] 6 per cent. first mortgage debenture stock of the Canadian Mineral Rubber Co., Limited, incorporated under the laws of the Dominion with an authorized capital of $1,500,000, of which $200,000 in 6 per cent. preferred stock and $800,000 common stock have been issued. The debentures mentioned are part of a certain authorized issue to be secured by a first mortgage on certain valuable gilsonite and bituminous limestone mines in the state of Utah, and all the issued shares of the American Asphaltum and Rubber Co., of Chicago. The principal products of the company are insulating compounds for electric wires, battery bells and the like; pipe coatings; floor mastic for floors and courtyards; street pavements such as have been laid in Chicago, Cleveland, Pittsburgh, and other American cities; asphalt fillers for reservoirs and other like construction; and roofing material. One of the directors of the Canadian company is J. F. Hill, president of the American Asphaltum and Rubber Co., and the other members of the board are residents in Canada. It is stated that the proceeds of the new issue are to be devoted to pushing the business of the company in Canada and Mexico.

TRADE NEWS NOTES.

AN offering of securities at public auction in New York on June 16 included 250 shares of Apsley Rubber Co. (Hudson, Massachusetts), which realized $100 per share.

Non-Puncture Inner Casing Co., May 1, 1909, under the laws of California; capital, $10,000. Incorporators: Isaac Andrews, William H. Council and Clyde Welsh.

Creditors of Richard H. Probert, sometime manufacturer of rubber machinery at Akron, Ohio, were notified by the referee in bankruptcy to appear on June 26 to receive his final report in the matter.

The Brockton Die Co. (Brockton, Massachusetts) have established a branch at Nos 149-151 Huron street, Chicago, for the accommodation of their Western trade. It is under the management of J. Headsten.

Three suits for $10,000 damages each have been filed against F. N. Taylor, of Fairfield, Nebraska, by three officials of the Peru-Pará Rubber Co., with offices at No. 53 Clark street, Chicago. They allege that Taylor in a circular sent out to shareholders of the company made false charges of mismanagement of the company's property in South America.

MR. J. G. WHITELEY KNIGHTED.

MR. JAMES GUSTAVUS WHITELEY, of Baltimore, who, since 1904, has filled the position first of consul and later of consul-general of the Congo Free State in the United States, has been made a knight of the Royal Order of the Crown by King Leopold, in recognition of his past services and as a mark of his Majesty's esteem. Cardinal Gibbons was decorated with the same order by King Leopold about a year ago. Since the Congo has been annexed by Belgium as a colony Mr. Whiteley's official functions have ceased, but he is still connected with various Congo concessionaire companies and will be engaged unofficially in the development of the Congo. He is a director in the Société Internationale Forestierè et Miniere du Congo, one of the Congo companies in which American capital is interested.

BATEMAN—MAGOWAN.

AT Trenton, New Jersey, on June 5, Miss Elizabeth L. Magowan, daughter of ex-Mayor Frank A. Magowan, was married to Henry T. Bateman, of Philadelphia. The ceremony was performed by the Rev. Hugh B. MacCauley, pastor of the Fourth Presbyterian Church. The bride was given in marriage by her brother, Frank A. Magowan, Jr.

PERSONAL MENTION.

MR. WILLIAM H. MOORE, one of the new directors of the United States Rubber Co., has long been an enthusiastic supporter of horse shows in America. During the past month he headed the list of winning owners at the International Horse Show in London, and was summoned by the King to receive his congratulations. The team driven by Mr. Moore was second in the coaching Marathon, in connection with the horse show, on June 14. Mr. Moore's private stable is one of the most notable in New York.

GENERAL SUPERINTENDENT PIPER.

MR. WILLIAM E. PIPER has been made general superintendent of the factories of the Boston Rubber Shoe Co., succeeding Mr. John Robson, who retires after a connection with the company of forty-one years. Mr. Piper is a native of Hyde Park, Massachusetts. He was graduated from the high school in that town

WILLIAM E. PIPER.

and also from the Massachusetts Institute of Technology (class of '94) with the degree S. B. He was appointed chemist of the Boston Rubber Shoe Co. a year later, assistant superintendent in May, 1897, and superintendent in March, 1906.

UNITED STATES RUBBER CO.'S ISSUES.

TRANSACTIONS on the New York Stock Exchange for five weeks, ending June 26:

COMMON STOCK.

Week	May 29...	Sales	5,100 shares	High	39½	Low	37¾
Week	June 5...	Sales	12,900 shares	High	42½	Low	38½
Week	June 12...	Sales	7,150 shares	High	42	Low	40½
Week	June 19...	Sales	3,400 shares	High	40½	Low	38
Week	June 26...	Sales	1,700 shares	High	38½	Low	38

For the year—High, 42½, June 4; Low, 27, Feb. 24.
Last year—High, 37½; Low, 17½.

FIRST PREFERRED STOCK.

Week	May 29...	Sales	4,600 shares	High	112	Low	111⅛
Week	June 5...	Sales	8,660 shares	High	117¼	Low	112
Week	June 12...	Sales	8,300 shares	High	118¼	Low	116½
Week	June 19...	Sales	2,230 shares	High	117⅝	Low	114¾
Week	June 26...	Sales	2,300 shares	High	116¼	Low	115

For the year—High, 118¼, June 7; Low, 98, Jan. 29.
Last year—High, 108; Low, 76.

SECOND PREFERRED STOCK.

Week	May 29...	Sales	2,000 shares	High	79½	Low	78½
Week	June 5...	Sales	6,000 shares	High	85	Low	79
Week	June 12...	Sales	1,790 shares	High	84	Low	82
Week	June 19...	Sales	1,110 shares	High	84	Low	82⅝
Week	June 26...	Sales	600 shares	High	83	Low	82½

For the year—High, 85, June 4; Low, 67½, Feb. 25.
Last year—High, 75¼; Low, 42.

SIX PER CENT. CERTIFICATES.

Week	May 29...	Sales	100 certs.	High	104⅝	Low	104⅜
Week	June 5...	Sales	137 certs.	High	104⅝	Low	104⅜
Week	June 12...	Sales	146 certs.	High	105	Low	104½
Week	June 19...	Sales	84 certs.	High	105¼	Low	105
Week	June 26...	Sales	79 certs.	High	105	Low	104½

CHANGE OF NAME OF COMPANY.

THE board of directors of the Trenton Rubber Manufacturing Co. have changed the name of the corporation to *Thermoid Rubber Co.* One reason is that the old title was a misnomer, since the factory is not actually located in Trenton, but in Hamilton township, near that city. It is thought that by having a more distinctive title for the company than one based upon the name of a locality its products may also be given greater individuality. The company express the conviction that the name "Thermoid" will become a synonym of "best" in all mechanical rubber goods.

FIRE IN A RUBBER FACTORY.

PART of the works of the Trenton Rubber Manufacturing Co., located in Hamilton township, just east of Trenton, New Jersey, was destroyed by fire early on the morning of June 26. The portion destroyed was that known as the old part. Good service was rendered by the company's fire apparatus, which had the assistance of the Trenton fire department and the fire equipment of the Pennsylvania Railroad shops nearby. The departments damaged were those used for the manufacture of pneumatic and solid tires, rubber reclaiming and pressed goods. The main portion of the mill was saved, embracing the power plant, mill and calender rooms, hose and belt departments, receiving and shipping departments, goods warehouse, and chemical laboratory. The factory was closed only during the day of the fire. Temporary equipment was installed for some departments and with very few exceptions goods have been manufactured, orders filled, and the entire business conducted without interruption. It is stated that the inventory in progress will show a loss probably not exceeding $40,000 or $50,000. Orders have been placed for new machinery, and plans are under way for the erection of a large fireproof, concrete and steel building, to replace the burnt departments, and while about it the company decided to materially increase the size of their plant by putting up a building 100 x 120 feet, two or three stories high, which will give employment to 75 or 100 additional men, when completed. The name of the company, by the way, has just been changed to Thermoid Rubber Co.

BOSTON BELTING CO.

THERE has been no change as yet of officers of the Boston Belting Co. in consequence of the death of President Forsyth, reported on another page of this issue. At a recent meeting of the board Thomas A. Forsyth was chosen as a director to fill the vacancy caused by the death of his brother. Francis H. Stevens continues to be president *pro tem*, and this organization is expected to continue until the annual meeting, late in the year.

NEW ENGLAND RUBBER CLUB—OUTING.

THE yearly midsummer outing of the New England Rubber Club is scheduled for Tuesday, July 13. Arrangements have been made for securing for this purpose the Riverside Recreation Grounds, in Weston, on the Charles river. The program will include golf, baseball and other games, and water sports, followed by a banquet in the evening.

MEXICAN RUBBER BURNED.

RECENT forest fires in the hot country of Vera Cruz and Oaxaca have been more destructive than any within the memory of people living in the sections affected, according to reports which come out of the rubber planting districts. There had been no rain for several months, and the undergrowth on plantations was parched and dry. Not only have many rubber trees been injured or destroyed which were nearing a tappable age, but much sugar cane has been burned, and even timber has been injured. For the most part the full details of losses have not reached the headquarters in the United States of the various rubber planting companies, but the hope is entertained that the losses were less serious than indicated in the reports telegraphed from Mexico. The belief seems general that even where rubber fields have been swept by the fire, the roots of the trees will be found alive and that new vigorous trees may be expected to grow up from these.

Rubber Lined Cotton Fire Hose.

THERE was a time when rubber-lined cotton fire hose was produced by coating one side of a flat woven fabric, similar to a cotton belt fabric, with rubber, and afterward riveting the edges together so as to make a hose tube. Later, the same kind of hose was made by riveting the edges of uncoated fabric, lining the fabric tube so produced by drawing a rubber tube through it, and steaming the two tubes together.

Earnest endeavors were made to produce a rubber-lined cotton fire hose with the aid of seamless multiple fabrics woven on straight looms. But difficulties of producing a satisfactory hose fabric tube which would sustain high pressures by weaving it in an unnatural flat form were found to be inherent in the process, and when circular woven fabrics appeared the flat hose process was abandoned.

When the "Eureka" circular woven hose was brought out the patents on such fabrics were infringed by parties who claimed that the patents were invalid, on the ground that as seamless multiple fabrics had been produced on straight looms, no invention was required to produce similar fabrics on a circular loom. After comparing the merits of the two methods of producing seamless fire hose fabrics—namely, by weaving in expanded form such as hose assumes when in use, or in flat form, so that fabric is necessarily distorted when in use—a United States circuit court decided that the circular method of weaving was so far superior to the flat that the advantages entitled the inventor "to the benefits of all good results," and (to quote from the decision) "that this is considerable is evidenced by the fact that fire hose thus constructed has driven all the older forms from the market." The victory of the circular method was so complete that there were no more efforts to produce a flat woven, multiple hose fabric for many years.

In October, 1875, a section of Eureka fire hose was tested to 700 pounds without injury—a strength before unknown in fire hose—and immediately after a similar section was submitted with a proposal to supply 5,000 feet to the New York fire department. As the facilities of the company at that time were limited, the proposal was made for but 5,000 feet, though the department had advertised for a larger amount, but the advantages of the hose over the leather, riveted cotton, and rubber hose then in use were so evident that not only was the 5,000 feet ordered, but additional orders were given for Eureka with sufficient time allowance to permit of its production. The reputation of Eureka hose was at once established.

In 1876, after an investigation of the merits of various kinds of fire hose, a special board of naval officers recommended that "Paragon" hose, a hose similar to Eureka except that it is of one ply less, should be adopted as the navy department standard. As a result Paragon was used exclusively by the navy department until 1885, when it was represented to the government that one maker should not have a monopoly of naval hose trade, and the business was thrown open to public bidding. During the nine years that Paragon was supplied there was no complaint whatever from the department of unsatisfactory hose—a condition which has not always prevailed since.

Eureka and its companion Paragon since 1875 have gone into all sections of the United States and Canada, and the name "Eureka" is well and favorably known in various parts of Central and South America, and of Europe, Asia, Africa and Australia. Hose of the same make is also extensively used by railroads and other large corporations. Not only have these brands been used so extensively, but by reason of their cost of manufacture and superior quality have brought good prices, proving that it was merit and not initial cheapness that brought the demand.

In 1903 appeared the first so-called "high grade" fire hose specification of the New York fire department, and with the advent of such specification came an era of trouble with hose in the department. This specification imposed as a condition that a piece of rubber tubing 2 inches long should be capable of stretching to 14 inches; then when immediately released and a new 2 inches marked, this 2 inches should stretch to 14 inches, and after being held for ten minutes and released, the marks should return within ten minutes to within 2⅛ inches of each other. In more or less modified forms those requirements continued for several years. When the first specification referred to was issued the Eureka Fire Hose Manufacturing Co. wrote concerning it:

> We have received the New York hose specifications. The rubber specification is extraordinary. It does not seem fair that hose makers should be required to guarantee hose for a term of years, and yet to put into it linings in which they lack confidence. To produce the extraordinary degree of elasticity and resilience that this specification demands, considerations of durability and adaptability of the rubber for hose lining purposes must be made subservient to the necessity of producing tubes that will comply with excessive laboratory requirements. . . . To meet the requirements of the New York specification will lead to no gain in quality, and indeed, to the probability of a decrease in durability, beside which we would be using a tube which has never withstood the test of long and severe service, and about the lasting qualities of which we would therefore know comparatively little.

This letter may now be considered historic, as it was prophetic at the time of its issue. It is a fact that most of the criticisms of hose supplied by leading manufacturers to the New York fire department under the so-called high grade specifications were caused by the compliance of such manufacturers with arbitrary and unpractical requirements—a compliance that invariably increased the cost of producing the hose with injury to the product. The original belief of hose manufacturers, with a rubber lining tube, no matter how good the quality of rubber compound may be, is liable to be injured by a vulcanization that will insure a strict compliance with stretch and return requirements that existed for several years in New York department specifications, is confirmed by the experience of the department with rubber linings made to conform to that specification.

If a manufacturer, rather than to decline bidding for hose contracts in the New York department, consented, no matter how reluctantly, to furnish hose under such specifications, he was of course, legally responsible for any defects that might develop, even though they were directly due to strict compliance with terms of specification that such manufacturer had protested against, but certainly there is some question as to his moral obligation, especially when it is considered that he would have preferred to furnish hose that he knew to be right, and which would have brought him credit instead of criticism, and which would also have cost less to produce than the hose which he was compelled to furnish by specification requirements.

When it is sometimes claimed that rubber fire hose possesses certain advantages over cotton hose, it evidently is forgotten that the hose most largely used in the best fire departments prior to the introduction of Eureka hose was rubber, and that it was chiefly in competition with rubber hose that Eureka made its success during its earlier years; and also that Eureka was received and used with equal favor in the warm weather of the South and the cold, wintry seasons of the North. It was certainly not simply because "the rubber hose cost appreciably more than cotton rubber lined hose" that rubber hose was so largely superseded, for in those early days Eureka was a high-priced hose. The rubber hose of those times, it may be added, was generally a first class article of its kind, made by manufacturers who aimed to produce the best hose that could be produced.

With regard to other forms of cotton hose than a multiple woven fabric—which is composed of two or more plies so distinct as to permit the removal of one without injury to another, and yet are all woven together into a solid homogeneous fabric—it is not possible, even with the best machinery, to secure such uniformity of separately woven fabrics as is regularly secured by weaving all plies simultaneously by one operation of the loom. In the case of the solid woven hose in case the other ply becomes cut, the edges are bound down to the inner ply and do not readily fray out. Again, the binder warps of solid woven hose serve to carry any dampness that there may be in the inner ply to the outer surface, thereby accelerating the drying of the hose.

Some years ago a prominent fire chief expressed surprise at the extent of the plant employed by the Eureka Fire Hose Manufacturing Co. for the antiseptic treatment of hose, and the proof, which the great cost of maintaining such a plant affords, that the company does not consider the antiseptic treatment of hose merely a talking point for salesmen. The company's antiseptic department occupies more than 20,000 square feet of floor area; it has an extensive equipment of dry rooms, and machines and appliances for handling the hose during the processes, and employ a considerable force, night and day, to do its work. It consumes a large amount of expensive materials. The company antiseptically treats all of its fire hose.

The process employed by this company protects the fabric by removing the elements within the cotton that tend to its decay, so that fabrics treated by it are softer and lighter than before treatment, in contrast with some so-called waterproof and antiseptic treatments, which not only stiffen the fabrics, but add to their weight by saturating them with a lot of low-priced materials. More than 34 years' trial of the Eureka processes have demonstrated that hose receiving ordinary fire department care is effectually protected by them against rot and mildew.

A CRUDE RUBBER LAWSUIT.

A CASE decided recently in the supreme court of New York—a suit brought by an importer of rubber against a manufacturer, to enforce a contract for the sale of raw material—embodied some points of a nature to be of interest to the trade generally. The case was tried before a jury, which gave a verdict for the plaintiff. Counsel for the defendant moved to have the verdict set aside, when the judge called for briefs, rendering some weeks later a decision in which the motion was denied.

The defendant questioned the jurisdiction of the court in a case involving a "foreign" corporation, and both parties to this action were corporations of other states. The court construed the New York statute differently, however, and was guided by precedents, involving cases where one or both litigants were foreign corporations.

The court's jurisdiction was further questioned on the ground that if any contract did exist for the sale of rubber in this case, it was not made within New York, and that any action growing out of such contract should be in the state where it was made. The court held that this action did not grow out of the *making* of the contract, but out of its *breach*, which occurred in New York. The plaintiff contracted to deliver 15 tons of rubber "ex dock, New York," and the failure of the defendant to accept it there constituted a breach of contract. Where the contract was made was immaterial.

A further claim of the defendant company was that its official alleged to have made the contract in question—though president of the corporation—lacked authority to purchase supplies without the coöperation of the treasurer, this being one of the provisions of the corporate by-laws. Counsel for the plaintiff said, in his brief:

> The general understanding in the business world, to-day, is that the president of a corporation, in the absence of specific notice to the contrary, may be regarded as possessing such authority to bind his company as the name of his office would naturally lead one to suppose he possessed. He is generally regarded as being at the head of the company.

The brief quoted from a decision confirmed by the New York court of appeals in which it was held:

> It is well settled that a business corporation cannot by its by-laws so limit the power of its executive officers that the corporation shall not be liable for ordinary engagements made by such officers in the transaction of the company's business with those who have no knowledge of such limitation - - - and in the absence of express notice, a person dealing with such corporation is entitled to assume that in the ordinary transaction of its business the president is authorized to act for it and the corporation is liable for contracts made in the conduct of its business.

The court in the case under review decided in accordance with this precedent.

The style of contract submitted by the plaintiff company as the basis of its action was that customary in the sale of crude rubber in the United States, in which the importer or broker, on a printed form, delivers to the buyer a memorandum of the grades and amount sold, price, and conditions of delivery and payment. It is not usual for the buyer to confirm such contract, but the defendant asserted that in the absence of such confirmation no legal contract existed. The court held, however, that the memorandum of sale referred to, together with certain correspondence which ensued in this case, constituted a valid contract, no particular form being essential.

Review of the Crude Rubber Market.

THE entries at the port of Pará for the crop year which ends with this date, of rubber of all grades (including caucho), appear to have been as large as in any former year, if not exceeding all records. The figures for the last year are available only to June 28, and it is possible that the remaining days of the month brought into Pará enough rubber to bring the total for the twelve months up to or beyond the record figure of 1906-07. The official returns for several years past have been—

1901-02	*tons* 30,000	1905-06	*tons* 34,490
1902-03	29,850	1906-07	38,005
1903-04	36,580	1907-08	36,650
1904-05	33,060	1908-09	*a* 37,970

[*a*—To and including June 28.]

Whatever interest these figures may possess from any other point of view, they afford no guide to the tendency of prices from year to year. Else the large production of the past season might indicate a decline in prices, whereas the quotations at this date are far above those reported at any other period in the history of the trade. While on the subject of the production of the Amazon regions, one suggestion that has been heard may have some pertinence, namely, that the steady advance in the consuming markets for some months past has stimulated shipments from the *seringaes* to such an extent as to leave smaller stocks than usual upriver. In this event the trade will be obliged to depend wholly upon stocks already shipped from the Amazon while awaiting the next crop, the first returns from which are not due much before the end of summer.

As this paper goes to press cables from London indicate prices there as high as 6*s.* 3½*d.*@6*s.* 4*d.* [=$1.54] for Pará rubber, and as high as 7 shillings [=$1.70.3] for plantation, smoked.

Following are the quotations of New York for Pará grades, one year ago, one month ago, and June 29—the current date:

PARA.	July 1, '08.	June 1, '09.	June 29.
Islands, fine, new	87@ 88	131@132	140@141
Islands, fine old	none here	132@133	143@144
Upriver, fine, new	93@ 94	134@135	147@148
Upriver, fine, old	95@ 96	135@136	149@150
Islands, coarse, new	44@ 45	66½@ 67	68@ 69
Islands, coarse, old	none here	70@ 71	71@ 72
Upriver, coarse, new	64@ 65	98@ 99	104@105
Upriver, coarse, old	none here	none here	none here
Cametá	.....	77@ 78	80@ 81
Caucho (Peruvian), ball	50@ 51	87@ 88	94@ 95
Caucho (Peruvian), sheet	62@ 63	76@ 77	80@ 81
Ceylon (plantation), fine sheet	103@104	135@136	155@156

AFRICAN.

Popori ball, prime	110@111	Massai, red	106@107
Lopori strip, prime	—@ —	Soudan niggers	101@102
Aruwimi	@100	Cameroon ball	74@ 75
Upper Congo ball, red	104@105	Benguela	67@ 68
Ikelemba	—@ —	Madagascar, pinky	98@ 99
Siera Leone, 1st quality	106@107	Accra flake	22@ 23

CENTRALS.

Esmeralda, sausage	90@ 91	Mexican, scrap	89@ 90
Guayaquil, strip	77@ 78	Mexican, slab	65@ 66
Nicaragua, scrap	87@ 88	Mangabeira, sheet	61@ 62
Panama	67@ 68	Guayule	34@ 35

EAST INDIAN.

Assam	95@ 96	Borneo	35@ 45
Pontianak	4¼@		

Late Pará cables quote:

	Per Kilo.		Per Kilo.
Islands, fine	6$000	Uprivers, fine	8$000
Islands, coarse	3$000	Upriver, coarse	5$500
		Exchange	15⅛d.

NEW YORK RUBBER PRICES FOR MAY (NEW RUBBER).

	1909.	1908.	1907.
Upriver, fine	1.26@1.35	.83@.94	1.12@1.16
Upriver, coarse	.96@ .98	.58@.65	.88@ .92
Islands, fine	1.23@1.31	.80@.90	1.10@1.15
Islands, coarse	.59@ .67	.43@.48	.62@ .67
Cametá	.69@ .78	.48@.57	.70@ .72

NEW YORK RUBBER PRICES FOR APRIL (NEW RUBBER).

	1909.	1908.	1907.
Upriver, fine	1.21@1.26	.78@.84	1.15@1.18
Upriver, coarse	.92@ .96	.55@.58	.91@ .94
Islands, fine	1.18@1.23	.75@.80	1.14@1.16
Islands, coarse	.56@ .59	.42@.44	.66@ .68
Cametá	.63@ .69	.44@.48	.71@ .72

New York.

IN regard to the financial situation, Albert B. Beers (broker in crude rubber and commercial paper, No. 68 William street, New York), advises as follows: "The demand for commercial paper has continued good during June, but the supply in the rubber line has been rather limited, and the best names have sold at 4¼@4¾ per cent., and those not so well known at 5@5½ per cent.

Rotterdam.

THE new supply of Congo rubber, mentioned in our last report, has arrived and been placed on the market. The same consisted of about 18,500 kilograms Upper Congo and about 2,500 kilograms Congo of various grades and was sold on June 2 by public inscription. There was an active demand, a large number of firms made bids and the competition was keen, all the lots being taken at prices averaging from 3 to 4 per cent. above the appraised value. Two small lots Java plantation rubber, total weight 650 kilograms, of good but not quite prime quality, were offered at the same time and found purchasers at about 10 per cent. above their appraised value. A further lot of about 600 kilograms of somewhat inferior quality will be placed on the market on the 9th.

Balata.—Some Surinam leaf, spot goods, changed hands, and the old crop season can now be considered exhausted. The first small arrivals of the new crop, shipped under contract, are expected within the next few days. There were no arrivals of Venezuela block.

A. KNOTTENBELT & CO.

Rotterdam, June 8, 1909.

Statistics of Para Rubber (Excluding Caucho).

NEW YORK.

	Fine and Medium.	Coarse.		Total 1909.	Total 1908.	Total 1907.
Stocks, April 30..*tons*	384	159	=	543	357	277
Arrivals, May	554	508	=	1062	1506	1175
Aggregating	938	667	=	1605	1863	1452
Deliveries, May	816	605	=	1421	1493	1083
Stocks, May 31	122	621	=	184	370	369

	PARA.			ENGLAND.		
	1909.	1908.	1907.	1909.	1908.	1907.
Stocks, April 30.....*tons*	935	1040	510	720	2005	950
Arrivals, May	1370	1955	1765	830	700	910
Aggregating	2305	2995	2275	1550	2705	1860
Deliveries, May	1750	2360	1670	950	1110	800
Stocks, May 31	555	635	605	600	1595	1060

	1909.	1908.	1907.
World's visible supply, May 31.....tons	2,367	3,469	3,091
Pará receipts, July 1 to May 31	29,040	28,420	30,460
Pará receipts of Caucho, same dates	7,540	6,370	5,960
Afloat from Pará to United States, May 31	481	750	498
Afloat from Pará to Europe, May 31	542	424	835

African Rubbers.

NEW YORK STOCKS (IN TONS).

January 1, 1908	156	October 1, 1908	134
February 1	224	November 1	134
March 1	123	December 1	179
April 1	201	January 1, 1909	156
May 1	165	February 1	157
June 1	446	March 1	200
July 1	334	April 1	178
August 1	145	May 1	268
September 1	133	June 1	156

Liverpool.

WILLIAM WRIGHT & Co. report [June 1]:

Fine Pará.—With declining receipts and more trade demand, especially from America, a large business has been done at advancing prices, and the price of fine has advanced fully 3½*d.* per pound. All present appearances point to a still further advance in values, as the Manáos price is above the parity of price ruling here, with an active demand. New York is also strong and active. Until the receipts of the new crop make themselves felt, there does not seem much likelihood of any decided fall in values.

Rubber Receipts at Manaos.

DURING April and ten months of the crop season for three years [courtesy of Messrs. Scholz & Co.]:

	APRIL.			JULY-APRIL.		
	1909.	1908.	1907.	1908-'9.	1907-'8.	1906-'7.
Rio Purús-Acre .....*tons*	545	432	634	8,411	8,561	7,880
Rio Madeira	141	302	318	2,935	2,898	3,273
Rio Juruá	280	541	871	3,966	3,930	4,633
Rio Javary-Iquitos	96	72	115	2,414	2,496	2,811
Rio Solimões	35	29	48	980	1,107	903
Rio Negro	72	100	77	555	541	603
Total	1,169	1,476	2,063	19,261	19,533	20,103
Caucho	781	792	753	5,820	5,439	4,588
Total	1,950	2,268	2,816	25,081	24,972	24,691

Rubber Scrap Prices.

LATE New York quotations—prices paid by consumers for carload lots, per pound—show an advance since last month:

Old rubber boots and shoes—domestic	9⅝@ 9¾
Old rubber boots and shoes—foreign	9½@ 9⅝
Pneumatic bicycle tires	6¾@ 6½
Automobile tires	6⅜@ 6½
Solid rubber wagon and carriage tires	7 @ 7½
White trimmed rubber	9½@10
Heavy black rubber	5¾@ 6¼
Air brake hose	4¼@ 4½
Garden hose	2⅝@ 2¾
Fire and large hose	3½@ 3⅝
Matting	1½@ 1¾

IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weights in Pounds.]

MAY 25.—By the steamer *Horatio* from Manáos and Pará:

IMPORTERS.	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.
New York Commercial Co.	149,600	30,800	50,600	1,700 =	232,700
General Rubber Co.	20,300	5,400	42,900	33,300 =	101,900
Poel & Arnold	32,300	2,200	21,900	23,400 =	79,800
C. P. dos Santos	34,600	4,600	9,400	8,400 =	57,000
Hagemeyer & Brunn	21,100	1,800	31,700	..... =	54,600
A. T. Morse & Co.	10,700	.....	33,000	..... =	43,700
Edmund Reeks & Co.	.....	.....	17,800	..... =	17,800
TOTAL	268,600	44,800	207,300	66,800 =	587,500

JUNE 4.—By the steamer *Demstan*, from Manáos and Pará:

Poel & Arnold	204,500	95,800	96,700	49,600 =	446,600
New York Commercial Co.	134,700	32,900	61,100	12,200 =	240,900
General Rubber Co.	66,100	13,600	67,700	4,900 =	152,300
A. T. Morse & Co.	17,500	.....	69,300	15,800 =	102,600
Hagemeyer & Brunn	8,200	.....	53,500	..... =	61,700
C. P. dos Santos	32,200	7,700	2,000	..... =	41,900
Edmund Reeks & Co.	6,100	1,800	10,600	..... =	18,500
TOTAL	469,300	151,800	360,900	82,500 =	1,064,500

JUNE 14.—By the steamer *Coarense*, from Manáos and Pará:

Poel & Arnold	156,900	72,900	106,700	16,900 =	353,400
New York Commercial Co.	82,600	24,500	38,900	158,200 =	304,200
Hagemeyer & Brunn	26,900	3,800	160,000	..... =	190,700
A. T. Morse & Co.	68,900	6,000	94,400	..... =	169,300
General Rubber Co.	300	1,400	51,800	300 =	53,800
C. P. dos Santos	28,000	6,100	2,300	..... =	36,400
Edmund Reeks & Co.	3,600	300	14,500	..... =	18,400
Crossman & Van Sicklen	5,100	3,300	1,800	..... =	10,200
TOTAL	372,300	118,300	470,400	175,400 =	1,136,400

PARA RUBBER VIA EUROPE.

POUNDS.

MAY 29.—By the *Campania*=Liverpool:

New York Com. Co. (Fine)	33,000	
New York Com. Co. (Coarse)	9,000	
Livesey & Co. (Coarse)	22,500	
Poel & Arnold (Coarse)	11,000	75,500

MAY 27.—By the *Majestic*=London:

Poel & Arnold (Coarse)		22,500

JUNE 1.—By the *Joachem*=Mollendo:

W. R. Grace & Co. (Caucho)		13,500

JUNE 1.—By the *Minnetonka*=London:

General Rubber Co. (Coarse)		45,000

JUNE 2.—By the *Caronia*=Liverpool:

Poel & Arnold (Fine)	44,500	
New York Com. Co. (Fine)	13,500	
Poel & Arnold (Coarse)	107,000	165,000

JUNE 3.—By the *Caracas*=Bolivar.

General Export Co. (Fine)		40,000

JUNE 4.—By the *Lusitania*=Liverpool:

New York Commercial Co. (Fine)		28,000

JUNE 4.—By the *Lincoln*=Hamburg:

Poel & Arnold (Coarse)		22,500

JUNE 7.—By the *Cedric*=Liverpool:

New York Com. Co. (Fine)	80,000	
New York Com. Co. (Coarse)	22,000	
Poel & Arnold (Coarse)	22,000	
Livesey & Co. (Coarse)	13,500	
Rubber Import Co. (Coarse)	11,500	
Poel & Arnold (Caucho)	22,500	171,500

JUNE 8.—By the *Kroonland*=Antwerp:

Poel & Arnold (Coarse)		11,500

JUNE 9.—By the *Bluecher*=Hamburg:

W. L. Gough & Co. (Fine)	7,000	
Poel & Arnold (Coarse)	15,000	22,000

JUNE 11.—By the *Mauretania*=Liverpool:

Poel & Arnold (Coarse)	93,000	
New York Com. Co. (Fine)	33,000	126,000

JUNE 14.—By the *Lapland*=Antwerp:

W. L. Gough Co. (Fine)		11,500

JUNE 15.—By the *Surinam*=Bolivar:

General Export Co. (Fine)	20,000	
General Export Co. (Coarse)	22,500	
G. Amsinck & Co. (Fine)	31,000	
American Trading Co. (Fine)	5,500	
American Trading Co. (Coarse)	5,000	84,000

JUNE 16.—By the *Carmania*=Liverpool:

Poel & Arnold (Fine)	240,000	
Poel & Arnold (Coarse)	50,000	
New York Com. Co. (Fine)	70,000	
New York Com. Co. (Coarse)	22,000	
Livesey & Co.	11,500	393,500

JUNE 19.—By the *Campania*=Liverpool:

Poel & Arnold (Coarse)	4,000	
New York Com. Co. (Coarse)	11,000	15,000

JUNE 21.—By the *Cleveland*=Hamburg:

Poel & Arnold (Coarse)	10,000	
New York Com. Co. (Fine)	2,500	12,500

OTHER NEW YORK ARRIVALS.

CENTRALS.

[*This sign, in connection with imports of Centrals, denotes Guayule rubber.]

POUNDS.

MAY 24.—By the *Morro Castle*=Frontera:

E. Steiger & Co.	4,500	
Graham, Hinkly & Co.	2,500	
H. Marquardt & Co.	2,500	
W. L. Wadleich	1,500	
E. N. Tibbals Co.	1,000	
General Export Co.	1,000	13,000

MAY 25.—By the *Mansanillo*=Tampico:

Edward Maurer	*110,000	
New York Commercial Co.	*35,000	*145,000

MAY 26.—By the *Panama*=Colon:

G. Amsinck & Co.	8,000	
Mecke & Co.	1,500	
Roldan & Van Sickle	1,000	10,500

MAY 26.—By the *Knutsford*=Maccio:

A. D. Hitch & Co.		11,500

MAY 26.—By *El Dia*=Galveston:

Continental-Mexican Rubber Co.		*175,000

MAY 27.—By the *Tagus*=Colombia:

A. Held	5,500	
G. Amsinck & Co.	3,000	
For Europe	9,000	17,500

MAY 27.—By the *Antilles*=New Orleans:

Silverstein & Kellog	1,000	
Manhattan Rubber Mfg. Co.	1,000	
A. T. Morse & Co.	1,000	
G. Amsinck & Co.	1,000	4,000

MAY 28.—By the *Mexico*=Frontera:

Harburger & Stack	3,500	
A. Klipstein & Co.	1,500	
H. Marquardt & Co.	2,000	
Isaac Kubie Co.	1,000	8,000

MAY 29.—By *El Cid*=Galveston:

Edward Maurer	15,000	
For Akron, O.	22,500	37,500

JUNE 1.—By the *Cavour*=Bahia:

New York Commercial Co.	17,000	
A. D. Hitch & Co.	8,000	
J. H. Rossback & Bros.	7,000	
Poel & Arnold	10,000	42,000

JUNE 1.—By the *Vigilancia*=Tampico:

Edward Maurer	*67,000	
Poel & Arnold	*35,000	*102,000

JUNE 1.—By the *Denver*=Galveston:

Poel & Arnold		*35,000

JUNE 1.—By the *Joachem*=Colon:

G. Amsinck & Co.	2,500	
Mecke & Co.	2,000	
Kunhardt & Co.	2,000	
Roldan & Van Sickle	1,000	10,500
A. Santos & Co.	2,000	
J. S. Sambrade	1,500	
Brandon & Bros.	1,000	13,000

JUNE 2.—By *El Paso*=Galveston:

Continental-Mexican Rubber Co.		*450,000

JUNE 2.—By the *Advance*=Colon:

Pablo Calvet Co.	4,500	
Demarest Bros. & Co.	3,500	
Roldan & Van Sickle	3,000	
Elias & Abdoa	2,000	
G. Amsinck & Co.	1,500	
H. Mann & Co.	1,500	
Isaac Kubie & Co.	1,000	17,000

JUNE 4.—By the *Lincoln*=Hamburg:

George A. Alden & Co.		10,000

JUNE 5.—By the *Yumuri*=Tampico:

Edward Maurer	*90,000	
Interior Points	*50,000	*140,000

JUNE 5.—By the *Monterey*=Frontera:

Harburger & Stack	9,000	
Strube & Ultze	6,500	
E. N. Tibbals & Co.	4,500	
E. Stuger & Co.	4,000	
Isaac Kubie & Co.	3,000	
General Export Co.	2,500	
H. Marquardt & Co.	2,000	
American Trading Co.	1,500	33,000

JUNE 7.—By the *Alliance*=Colon:

G. Amsinck & Co.	4,500	
Mecke & Co.	3,500	
J. S. Sambrade	1,500	
Fidanque Bros. & Co.	1,000	
Meyer Hecht	1,000	11,500

JUNE 9.—By the *Brazos*=Galveston:

Poel & Arnold		*45,000

JUNE 9.—By the *Antilles*=New Orleans:

A. T. Morse & Co.	3,500	
Graham Hinkly & Co.	1,000	4,500

JUNE 9.—By *El Monte*=Galveston:

Continental-Mexican Rubber Co.	*45,000	
For Canada	*35,000	*80,000

JUNE 9.—By the *Sarnia*=Greytown:

G. Amsinck & Co.	20,000	
A. Rosenthal & Sons.	4,000	
J. J. Julia & Co.	2,000	
Mecke & Co.	2,500	
A. M. Capen's Sons.	2,000	
Hy. Mann & Co.	2,000	
J. A. Pauli & Co.	2,000	
Suzarte & Whitney	1,500	
Isaac Brandon & Bros.	1,500	37,500

JUNE 10.—By the *Voltaire*=Bahia:

New York Commercial Co.	11,500	
Poel & Arnold	11,500	
J. H. Rossback & Bro.	11,000	34,000

JUNE 12.—By the *Merida*=Frontera:

Harburger & Stack	13,000	
E. N. Tibbals & Co.	2,500	
H. Marquardt & Co.	2,500	
E. Steiger & Co.	1,000	19,000

JUNE 14.—By the *Colon*=Colon:

Piza Nephews & Co.	4,000	
G. Amsinck & Co.	2,500	
Hy. Mann & Co.	1,500	
Silva, Bussenius & Co.	1,500	
Delima, Cortessoz & Co.	1,000	10,500

JUNE 14.—By the *Cienfuegos*=Tampico:

Poel & Arnold	*45,000	
Edward Maurer	*40,000	
New York Commercial Co.	*45,000	*130,000

JUNE 14.—By the *Momus*=New Orleans:

Hy. Mann & Co.	5,000	
A. N. Rotholz	2,000	7,500

JUNE 16.—By the *Aug. Willem*=Colon:

A. Santos & Co.	2,000	
Fruit Despatch Co.	1,500	
Suzarte & Whitney	1,000	
Rosenthal & Sons	1,000	
Isaac Brandon & Bros.	1,500	7,000

JUNE 18.—By the *Mansanillo*=Tampico:

Edward Maurer	*175,000	
Poel & Arnold	*50,000	*225,000

JUNE 18.—By *El Cid*=Galveston:

Continental-Mexican Rubber Co.		*95,000

JUNE 19.—By the *Morro Castle*=Mexico:

Harburger & Stack	2,500	
H. Marquardt & Co.	1,500	
J. Kubie & Co.	1,500	
Edward Maurer	1,000	6,500

JUNE 19.—By the *Byron*=Bahia:

Poel & Arnold	42,000	
New York Commercial Co.	23,000	
A. Hirsch & Co.	22,500	
J. H. Rossback & Bros.	18,000	
A. D. Hitch & Co.	5,000	110,500

JUNE 21.—By the *Panama*=Colon:

G. Amsinck & Co.	5,000	
Mecke & Co.	2,000	
Roldan & Van Sickle	3,000	
Wessels, Kulemkampf Co.	1,500	
Eggers & Heinlein	1,500	
Henry Mann & Co.	1,500	
J. S. Sambrade & Co.	1,000	
Delima, Cortessoz & Co.	1,000	16,500

JUNE 21.—By *El Paso*=Galveston:

Continental-Mexican Rubber Co.	*70,000	
Edward Maurer	*25,000	*95,000

JUNE 21.—By the *Comas*=New Orleans:

A. T. Morse & Co.	1,000	
Manhattan Rubber Mfg. Co.	1,000	2,000

AFRICAN.

POUNDS.

MAY 22.—By the *Victoria*=Hamburg:

General Rubber Co.		8,000

MAY 22.—By the *Erika*=Lisbon:
General Rubber Co. ... 56,000

MAY 24.—By the *Arabic*=Liverpool:
Poel & Arnold ... 11,000

MAY 26.—By the *Vaderland*=Antwerp:
A. T. Morse & Co. ... 9,000

MAY 28.—By the *Florida*=Havre:
Livesey & Co. ... 9,000

MAY 29.—By the *Campania*=Liverpool:
Poel & Arnold ... 45,000

MAY 29.—By the *Pennsylvania*=Hamburg:
Rubber Trading Co. ... 16,000
W. L. Gough & Co. ... 8,000 24,000

JUNE 1.—By the *Celtic*=Liverpool:
General Rubber Co. ... 33,500

JUNE 1.—By the *Zeeland*=Antwerp:
W. L. Gough Co. ... 20,000
A. T. Morse & Co. ... 11,000 31,000

JUNE 1.—By the *Chicago*=Havre:
George A. Alden & Co. ... 11,000

JUNE 2.—By the *Caronia*=Liverpool:
Poel & Arnold ... 20,000
General Rubber Co. ... 22,500
Livesey & Co. ... 9,000 51,500

JUNE 4.—By the *Lincoln*=Hamburg:
Poel & Arnold ... 35,000
George A. Alden & Co. ... 15,000
A. T. Morse & Co. ... 8,000
Rubber Trading Co. ... 5,000 63,000

JUNE 7.—By the *Cedric*=Liverpool:
Poel & Arnold ... 56,000
General Rubber Co. ... 90,000
George A. Alden & Co. ... 11,000
Livesey & Co. ... 6,500 163,500

JUNE 7.—By the *Oppeburg*=Lisbon:
General Rubber Co. ... 56,000

JUNE 7.—By the *Cincinnati*=Hamburg:
A. T. Morse & Co. ... 22,500
Rubber Trading Co. ... 10,000
Livesey & Co. ... 7,000 39,500

JUNE 8.—By the *Kroonland*=Antwerp:
Poel & Arnold ... 45,000
A. T. Morse & Co. ... 44,000
George A. Alden & Co. ... 11,000
Rubber Trading Co. ... 3,500 103,500

JUNE 9.—By the *Bluecher*=Hamburg:
A. T. Morse & Co. ... 45,000
General Rubber Co. ... 14,000 59,000

JUNE 11.—By the *Louisiana*=Havre:
Poel & Arnold ... 15,000

JUNE 11.—By the *Mauretania*=Liverpool:
George A. Alden & Co. ... 33,500
Poel & Arnold ... 11,000 44,500

JUNE 12.—By the *Amerika*=Hamburg:
George A. Alden & Co. ... 11,500
Poel & Arnold ... 13,500
A. T. Morse & Co. ... 11,000 36,000

JUNE 14.—By the *Baltic*=Liverpool:
General Rubber Co. ... 56,000

JUNE 14.—By the *Savoie*=Havre:
George A. Alden & Co. ... 15,000

JUNE 14.—By the *Lapland*=Antwerp:
George A. Alden & Co. ... 85,000
Poel & Arnold ... 45,000
Joseph Cantor ... 11,000
Rubber Trading Co. ... 7,000 148,000

JUNE 16.—By the *Carmania*=Liverpool:
Poel & Arnold ... 65,000
George A. Alden & Co. ... 7,000 72,000

JUNE 19.—By the *Campania*=Liverpool:
Poel & Arnold ... 11,000

JUNE 21.—By the *Cleveland*=Hamburg:
George A. Alden & Co. ... 30,000
A. T. Morse & Co. ... 7,000
Rubber Trading Co. ... 8,000
W. L. Gough Co. ... 5,000 50,000

JUNE 21.—By the *Arabic*=Liverpool:
General Rubber Co. ... 56,000
Rubber Import Co. ... 4,500 60,500

JUNE 21.—By the *Vaderland*=Antwerp:
W. L. Gough Co. ... 40,000
Rubber Trading Co. ... 9,000
Raw Products Co. ... 4,500
George A. Alden & Co. ... 4,500 58,000

JUNE 22.—By the *Mexico*=Bordeaux:
Robinson & Co. ... 11,500
H. A. Gould Co. ... 11,500
Livesey & Co. ... 13,500
General Rubber Co. ... 5,000 41,500

EAST INDIAN.

[*Denotes plantation rubber.]

POUNDS.

MAY 24.—By the *St. Louis*=London:
New York Commercial Co. ... *22,000
Poel & Arnold ... *13,500 *35,500

MAY 25.—By the *Minneapolis*=London:
General Rubber Co. ... 22,500

MAY 25.—By the *Albenga*=Singapore:
W. L. Gough Co. ... 22,500
George A. Alden Co. ... 4,500 27,000

MAY 27.—By the *Majestic*=London:
Poel & Arnold ... *15,500

MAY 27.—By the *Kobinga*=Colombo:
A. T. Morse & Co. ... *18,000
New York Commercial Co. ... *7,500 *25,500

JUNE 1.—By the *Philadelphia*=London:
New York Commercial Co. ... *39,000
Poel & Arnold ... *13,500
A. T. Morse & Co. ... 13,500 66,000

JUNE 1.—By the *Minnetaka*=:London:
General Rubber Co. ... 20,000

JUNE 1.—By the *Zeeland*=Antwerp:
A. T. Morse & Co. ... *6,000

JUNE 2.—By the *Oceanic* London:
A. T. Morse & Co. ... *22,500
Poel & Arnold ... *4,500
H. A. Gould & Co. ... *2,000 *29,000

JUNE 7.—By the *St. Paul*=London:
New York Commercial Co. ... *40,000
Poel & Arnold ... *13,500 *53,500

JUNE 8.—By the *Minnetonka*=London:
General Rubber Co. ... *40,000
General Rubber Co. ... 13,500
Robinson & Co. ... 7,000 60,500

JUNE 11.—By the *Guilia*=Colombo:
A. T. Morse & Co. ... *7,500

JUNE 14.—By the *New York*=London:
New York Commercial Co. ... *55,000
Poel & Arnold ... *60,000
A. T. Morse & Co. ... *13,500 *118,500

JUNE 14.—By the *Rannefels*=Colombo:
A. T. Morse & Co. ... *5,500
New York Commercial Co. ... *4,500 *10,000

JUNE 14.—By the *Lapland*=Antwerp:
New York Commercial Co. ... *22,500

JUNE 15.—By the *Minnehaha*=London:
General Rubber Co. ... *22,500

JUNE 21.—By the *St. Louis*=London:
New York Commercial Co. ... *22,500
A. T. Morse & Co. ... *2,500
Livesey & Co. ... *2,000 *27,000

JUNE 16.—By the *Carmania*=Liverpool:
Poel & Arnold ... 9,000

JUNE 21.—By the *Washington*=Bremen:
New York Commercial Co. ... *7,000

GUTTA-JELUTONG.

MAY 25.—By the *Albenga*=Singapore:
Heabler & Co. ... 325,000
George A. Alden & Co. ... 325,000
Poel & Arnold ... 225,000
W. L. Gough Co. ... 55,000 930,000

JUNE 10.—By the *Norman Prince*=Singapore:
George A. Alden & Co. ... 200,000
Heabler & Co. ... 115,000 315,000

GUTTA-PERCHA.

POUNDS.

MAY 25.—By the *Albenga* Singapore:
Heabler & Co. ... 50,000

MAY 29.—By the *Pennsylvania*=Hamburg:
E. Oppenheim ... 19,000

JUNE 10.—By the *Bleucher*=Hamburg:
E. Oppenheim ... 11,000

BALATA.

MAY 21.—By the *Grenada*=Trinidad:
G. Amsinck & Co. ... 2,500
J. A. Pauli & Co. ... 2,000 4,500

JUNE 1.—By the *Philadelphia*=London:
W. L. Gough Co. ... 5,500

JUNE 1.—By the *Coppename*=Demerara:
George A. Alden & Co. ... 9,000

JUNE 15.—By the *Surinam*=Bolivia:
For Europe ... 35,000

JUNE 21.—By the *Mexico*=Havre:
C. P. dos Santos. ... 11,500

CUSTOM HOUSE STATISTICS.

PORT OF NEW YORK—APRIL.

Imports:	Pounds.	Value.
India-rubber	5,372,505	$4,085,511
Balata	12,508	5,496
Gutta-percha	24,612	7,115
Gutta-jelutong (Pontianak)	4,791,207	179,306
Total	10,200,832	$4,277,428
Exports:		
India-rubber	69,010	$58,811
Reclaimed rubber	53,161	6,992
Rubber scrap imported	1,511,278	$110,196

BOSTON ARRIVALS.

MAY 4.—By the *Sachem*=Liverpool:
George A. Alden & Co. (African) ... 5,000

PARA EXPORTS OF INDIA RUBBER, MAY, 1909 (IN KILOGRAMS).

	NEW YORK.					EUROPE.					
EXPORTERS.	Fine.	Medium.	Coarse.	Caucho.	TOTAL.	Fine.	Medium.	Coarse.	Caucho.	TOTAL.	TOTAL.
Gruner & Co.	105,927	49,162	48,981	23,238	227,308	107,085	12,304	12,290	164,731	296,410	523,718
E. Pinto Alves & Co.	27,030	.....	58,740	22,770	108,540	49,810	.....	13,860	38,610	102,280	210,820
Adelbert H. Alden	65,685	14,672	32,769	5,149	118,275	29,540	7,602	8,992	40,710	86,844	205,119
J. Marques	10,540	2,210	72,930	.....	85,680	36,040	2,720	26,400	.....	65,160	150,840
Alves Braga & Co.	.....	.....	.....	.....	.....	59,229	9,648	20,303	17,249	106,429	106,429
Gordon & Co.	770	.....	52,326	.....	52,496	17,637	4,230	4,883	17,010	43,760	96,256
R. O. Ahlers & Co.	12,685	.....	.....	.....	12,685	50,227	.....	3,545	25,945	79,717	92,402
R. Suarez & Co.	.....	.....	.....	.....	.....	39,275	114	2,341	24,478	66,208	66,208
Pires, Teixeira & Co.	10,200	.....	13,530	.....	23,730	22,950	680	11,880	.....	35,510	59,240
Mello & Co.	.....	.....	.....	.....	.....	7,412	.....	3,720	14,528	25,960	25,960
De Lagotellerie & Co.	15,330	3,685	1,004	.....	20,019	.....	.....	.....	.....	.....	20,019
Leite & Co.	.....	.....	.....	.....	.....	1,984	695	2,502	3,809	8,990	8,990
Scholz, Hartje & Co.	.....	.....	5,940	.....	5,940	.....	.....	.....	.....	.....	5,940
Braga Sobriuho & Co.	.....	.....	.....	.....	.....	.....	.....	.....	5,915	5,915	5,915
Itacoatiara, direct	.....	.....	.....	.....	.....	1,863	54	1,486	586	3,989	3,989
Manáos, direct	241,584	53,747	120,970	97,529	513,830	106,006	12,944	23,782	357,623	500,355	1,014,185
Iquitos, direct	.....	.....	.....	.....	.....	7,643	494	3,593	96,719	108,449	108,449
Total, May	489,751	123,476	407,190	148,686	1,168,503	536,701	51,485	139,577	808,213	1,353,976	2,704,479
Total, April	707,343	125,604	619,433	433,941	1,896,321	1,044,128	188,500	245,423	876,534	2,354,585	4,250,906
Total, March	786,778	134,535	486,099	523,316	1,930,728	1,044,496	193,071	378,918	846,180	2,462,665	4,393,393
Total, February	1,188,074	218,475	598,018	483,843	2,488,410	869,658	202,450	405,838	615,827	2,093,773	4,582,183
Total, January	1,036,998	218,053	639,306	324,149	2,218,506	1,521,113	154,401	365,351	775,642	2,816,507	5,035,013

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Antwerp.

THE regular monthly rubber inscription was set for June 30—too late for a report in this issue. It was expected that about 500 tons would be offered. At the preceding sale, on May 27, the offerings and sales compared as follows:

	Offered.	Sold.
Congo sorts ..... *kilos*	229,401	181,086
Other sorts	68,953	41,514
Total	298,354	222,600

There was a good strong demand and a rise in price of about 50 centimes per kilogram [4½ cents per pound]. Plantation rubber was very active.

Antwerp.

RUBBER ARRIVALS FROM THE CONGO.

MAY 24.—By the steamer *Leopoldville*:

Bunge & Co.	(Société Générale Africane)	*kilos*	120,000
"	(Chemins de fer Grands Lacs)		2,200
"	(Société Abir)		600
"	(Comité Special Katanga)		4,000
Société Coloniale Anversoise	(Belge du Haut Congo)		1,150
"	(Cie. du Lomami)		2,550
"	(Cie. du Kasai)		103,500
"	(Lulonga)		80
"			10,500
"	(Sud Cameron)		14,300
Société Générale de Commerce	(Lobay)		6,200
L. & W. Van de Velde			4,000
M. S. Cols			1,600
			270,680

RUBBER STATISTICS FOR MAY.

DETAILS.	1909.	1908.	1907.	1906.	1905.
Stocks, April 30..*kilos*	607,787	717,913	461,573	880,458	635,875
Arrivals in May.....	515,061	415,404	644,324	656,759	287,333
Congo sorts	442,098	337,368	557,136	536,564	214,751
Other sorts	72,963	78,036	87,188	120,195	72,582
Aggregating	1,122,848	1,133,317	1,105,897	1,537,217	923,208
Sales in May.....	433,610	361,740	352,983	811,966	576,104
Stocks, May 31.....	689,238	771,577	752,914	725,251	347,104
Arrivals since Jan. 1..	1,973,430	2,144,762	2,281,955	2,728,448	2,220,288
Congo sorts	1,443,130	1,859,791	1,938,228	2,110,079	1,757,649
Other sorts	530,300	284,971	343,727	618,369	462,639
Sales since Jan. 1....	1,879,927	2,380,079	2,187,225	2,738,384	2,414,545

Plantation Rubber.

EXPORTS FROM THE FAR EAST.

From Ceylon—January 1 to May 17:

1909	*pounds*	355,965
1908		239,017
1907		167,063

From Singapore—January 1 to May 5:

1909	*pounds*	923,511
1908		653,233
1907		413,834

From Penang—Jaunary 1 to April 18:

1909	*pounds*	982,564
1908		347,092
1907		46,961

[Increase from 1907 to 1908 for corresponding periods, 97.3 per cent.; increase 1908 to 1909, 82.4 per cent.]

PLANTATION YIELDS (IN POUNDS).

	1908.	1909.
Bukit Rajah Rubber Co.:		
May	7,423	19,723
Vallambrosa Rubber Co.:		
Two months to May 31.....	34,726	49,198
Lanadron Rubber Estates:		
Five months to May 31.....	62,918	84,666
Federated (Selanger) Rubber Co.:		
Two months to May 31.....	6,789	14,494
Pataling Rubber Estates Syndicate:		
Five months to May 31.....	25,048	49,399
Linggi Plantations:		
May	15,500	43,000
Perak Rubber Plantations:		
Two months to May 31.....	3,690	12,696
Consolidated Malay Rubber Estates:		
Five months to May 31.....	30,743	67,785
Kuala Lumpor Rubber Co.:		
Eleven months to May 31.....	.....	172,710
P. P. K. (Ceylon) Estates:		
May	2,334	3,309